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# Chapter 1

## Hierarchical Index

### 1.1 Class Hierarchy

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## Chapter 2

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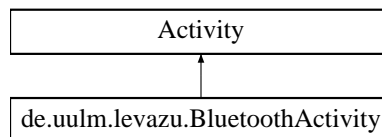


## Chapter 3

# Class Documentation

### 3.1 de.uulm.levazu.BluetoothActivity Class Reference

Inheritance diagram for de.uulm.levazu.BluetoothActivity:



#### Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)
- void **onResume** ()
- void **onStop** ()
- void **onDestroy** ()
- void **onActivityResult** (int requestCode, int resultCode, Intent data)

#### Private Member Functions

- void **connectBLE** ()
- void **disconnectBLE** ()
- void **displayData** (String data)
- void **readRFID** (byte[] data)
- void **setButtonEnable** ()
- void **setButtonDisable** ()
- void **startReadRssi** ()
- void **getGattService** (BluetoothGattService gattService)
- void **scanLeDevice** ()

#### Static Private Member Functions

- static IntentFilter **makeGattUpdateIntentFilter** ()

## Private Attributes

- Button **connectBtn** = null
- TextView **rsiValue** = null
- TextView **rfdText** = null
- BluetoothGattCharacteristic **characteristicTx** = null
- [RBLService](#) **mBluetoothLeService**
- BluetoothAdapter **mBluetoothAdapter**
- BluetoothDevice **mDevice** = null
- String **mDeviceAddress**
- boolean **flag** = true
- boolean **connState** = false
- boolean **scanFlag** = false
- byte[] **data** = new byte[30]
- Object **mLeScanCallback** = null
- boolean **ble\_supported** = false
- final ServiceConnection **mServiceConnection**
- final BroadcastReceiver [mGattUpdateReceiver](#)

## Static Private Attributes

- static final String **TAG** = BluetoothActivity.class.getSimpleName()
- static final int **REQUEST\_ENABLE\_BT** = 1
- static final long **SCAN\_PERIOD** = 2000

### 3.1.1 Member Data Documentation

#### 3.1.1.1 final BroadcastReceiver de.uulm.levazu.BluetoothActivity.mGattUpdateReceiver [private]

##### Initial value:

```
= new BroadcastReceiver() {
    @Override
    public void onReceive(Context context, Intent intent) {
        final String action = intent.getAction();

        if (RBLService.ACTION_GATT_DISCONNECTED.equals(action)) {
            Toast.makeText(getApplicationContext(), "Disconnected", Toast.LENGTH_SHORT).show();
            setButtonDisable();
        } else if (RBLService.ACTION_GATT_SERVICES_DISCOVERED.equals(action)) {
            Toast.makeText(getApplicationContext(), "Connected", Toast.LENGTH_SHORT).show();
            getGattService(mBluetoothLeService.getSupportedGattService());
        } else if (RBLService.ACTION_DATA_AVAILABLE.equals(action)) {
            data = intent.getByteArrayExtra(RBLService.EXTRA_DATA);
            readRFID(data);
        } else if (RBLService.ACTION_GATT_RSSI.equals(action)) {
            displayData(intent.getStringExtra(RBLService.EXTRA_DATA));
        }
    }
}
```

receives messages from BLE Shield

#### 3.1.1.2 final ServiceConnection de.uulm.levazu.BluetoothActivity.mServiceConnection [private]

##### Initial value:

```
= new ServiceConnection() {
    @Override
    public void onServiceConnected(ComponentName componentName, IBinder service) {
        mBluetoothLeService = ((RBLService.LocalBinder) service).getService();
    }
}
```

```

        if (!mBluetoothLeService.initialize()) {
            Log.e(TAG, "Unable to initialize Bluetooth");
            finish();
        }
    }

    @Override
    public void onServiceDisconnected(ComponentName componentName) {
        mBluetoothLeService = null;
    }
}

```

## 3.2 de.uulm.levazu.library.Budget Class Reference

### Public Member Functions

- void [setBudget](#) (JSONArray b)
- JSONArray [getBudget](#) ()
- [Budget](#) ()
- [Budget](#) (int userid)
- String [getUserId](#) ()
- int [getGroceries](#) ([Budget](#) budget)
- [Budget](#) (String userid)

### Private Attributes

- String **userid**
- JSONArray **budget**
- [WebAPI](#) **webAPI**
- [JSONParser](#) **jsonParser**

### 3.2.1 Detailed Description

Defines properties of a budget. It consists of the user id and the budget in form of a JSONArray, similar to the response from the server when queried. The advantage is that it needs no additional parsing, can be accessed like a hashmap and, when transferring it to a different activity it can be flattened to a String and from it create a new JSONArray without any additional parsing.

#### Author

Michael Legner

### 3.2.2 Constructor & Destructor Documentation

#### 3.2.2.1 de.uulm.levazu.library.Budget.Budget ( )

empty constructor, does nothing

#### 3.2.2.2 de.uulm.levazu.library.Budget.Budget ( int *userid* )

constructor

## Parameters

<i>userid</i>	id
---------------	----

**3.2.2.3** `de.uulm.levazu.library.Budget.Budget ( String userid )`

Constructor. Gets budget from database and assigns it to a Budget object

## Parameters

<i>userid</i>	id
---------------	----

**3.2.3 Member Function Documentation****3.2.3.1** `JSONArray de.uulm.levazu.library.Budget.getBudget ( )`

Getter for budget

## Returns

budget as JSONArray

**3.2.3.2** `int de.uulm.levazu.library.Budget.getGroceries ( Budget budget )`

Calculates total budget for category groceries.

## Parameters

<i>budget</i>	budget object
---------------	---------------

## Returns

total budget for category groceries as int; in case of an error -1

**3.2.3.3** `String de.uulm.levazu.library.Budget.getUserId ( )`

Getter for userId

## Returns

userid

**3.2.3.4** `void de.uulm.levazu.library.Budget.setBudget ( JSONArray b )`

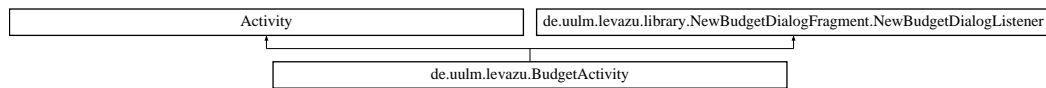
Setter for budget

## Parameters

<i>b</i>	budget as JSONArray
----------	---------------------

### 3.3 de.uulm.levazu.BudgetActivity Class Reference

Inheritance diagram for de.uulm.levazu.BudgetActivity:



#### Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)
- boolean **onOptionsItemSelected** (MenuItem item)
- void [showNewBudgetDialog](#) ()
- void [onDialogPositiveClick](#) (DialogFragment dialog)
- void [onDialogNegativeClick](#) (DialogFragment dialog)
- void [openGroceries](#) (View view)
- void [openHygiene](#) (View view)
- void [openHousekeeping](#) (View view)
- void [openStationery](#) (View view)
- void [openShoes](#) (View view)

#### Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

#### Package Attributes

- [Budget](#) **budget**
- [Helper](#) **h** = new [Helper](#)()

#### Private Member Functions

- void [setup](#) ()
- void [setupActionBar](#) ()

#### Static Private Attributes

- static String **API\_URL** = "http://mobile1.informatik.uni-ulm.de/websrv/"

#### 3.3.1 Detailed Description

Activity for budget management

Author

Michael Legner

### 3.3.2 Member Function Documentation

#### 3.3.2.1 void de.uulm.levazu.BudgetActivity.onDialogNegativeClick ( DialogFragment *dialog* )

The dialog fragment receives a reference to this Activity through the Fragment.onAttach() callback, which it uses to call the following methods defined by the NoticeDialogFragment.NoticeDialogListener interface

Implements [de.uulm.levazu.library.NewBudgetDialogFragment.NewBudgetDialogListener](#).

#### 3.3.2.2 void de.uulm.levazu.BudgetActivity.onDialogPositiveClick ( DialogFragment *dialog* )

The dialog fragment receives a reference to this Activity through the Fragment.onAttach() callback, which it uses to call the following methods defined by the NoticeDialogFragment.NoticeDialogListener interface

Implements [de.uulm.levazu.library.NewBudgetDialogFragment.NewBudgetDialogListener](#).

#### 3.3.2.3 void de.uulm.levazu.BudgetActivity.openGroceries ( View *view* )

start activity to manage sub-catergory groceries

Parameters

<i>view</i>	View associated with current object
-------------	-------------------------------------

#### 3.3.2.4 void de.uulm.levazu.BudgetActivity.openHousekeeping ( View *view* )

stub, should start activity to manage sub-catergory house keeping

Parameters

<i>view</i>	View associated with current object
-------------	-------------------------------------

#### 3.3.2.5 void de.uulm.levazu.BudgetActivity.openHyginie ( View *view* )

stub, should start activity to manage sub-catergory hyginie

Parameters

<i>view</i>	View associated with current object
-------------	-------------------------------------

#### 3.3.2.6 void de.uulm.levazu.BudgetActivity.openShoes ( View *view* )

stub, should start activity to manage sub-catergory shoes

Parameters

<i>view</i>	View associated with current object
-------------	-------------------------------------

#### 3.3.2.7 void de.uulm.levazu.BudgetActivity.openStationery ( View *view* )

start activity to manage sub-catergory stationery

## Parameters

<i>view</i>	View associated with current object
-------------	-------------------------------------

## 3.3.2.8 void de.uulm.levazu.BudgetActivity.setup ( ) [private]

extracted method that sets progress bars to values from database

## 3.3.2.9 void de.uulm.levazu.BudgetActivity.setupActionBar ( ) [private]

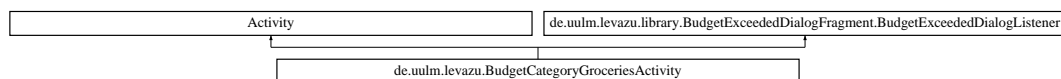
Set up the [android.app.ActionBar](#), if the API is available.

## 3.3.2.10 void de.uulm.levazu.BudgetActivity.showNewBudgetDialog ( )

Display dialog fragment when no budget for user set

## 3.4 de.uulm.levazu.BudgetCategoryGroceriesActivity Class Reference

Inheritance diagram for de.uulm.levazu.BudgetCategoryGroceriesActivity:



## Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)
- void [onSaveButtonClicked](#) (View view)
- void [showBudgetExceededDialog](#) ()
- void [onDialogPositiveClick](#) (DialogFragment dialog)
- void [onDialogNegativeClick](#) (DialogFragment dialog)

## Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)
- void [updateSeekBar](#) (double multi)

## Package Attributes

- [Helper](#) **h** = new [Helper](#)()
- int **groceriesMax** = 0
- int **groceriesBudget** = 0
- [Budget](#) **budget**

## Private Member Functions

- int [totalGroceriesBySeekBar](#) ()
- int [totalGroceriesByDBEntires](#) ()
- void [saveBudgetToDatabase](#) (boolean newBudgetLimit)
- void [updateSeekBarOnChange](#) (final TextView total, final TextView totalText, final SeekBar sbTotal, int progress, TextView p)

## Static Private Attributes

- static String **API\_URL** = "http://mobile1.informatik.uni-ulm.de/websrv/"

### 3.4.1 Detailed Description

activity with budget management for sub-category groceries

Author

Michael Legner

### 3.4.2 Member Function Documentation

#### 3.4.2.1 void de.uulm.levazu.BudgetCategoryGroceriesActivity.onDialogNegativeClick ( DialogFragment *dialog* )

The dialog fragment receives a reference to this Activity through the Fragment.onAttach() callback, which it uses to call the following methods defined by the NoticeDialogFragment.NoticeDialogListener interface

Parameters

<i>dialog</i>	Associated DialogFramegnt
---------------	---------------------------

Implements [de.uulm.levazu.library.BudgetExceededDialogFragment.BudgetExceededDialogListener](#).

#### 3.4.2.2 void de.uulm.levazu.BudgetCategoryGroceriesActivity.onDialogPositiveClick ( DialogFragment *dialog* )

The dialog fragment receives a reference to this Activity through the Fragment.onAttach() callback, which it uses to call the following methods defined by the NoticeDialogFragment.NoticeDialogListener interface

Parameters

<i>dialog</i>	Associated DialogFragment
---------------	---------------------------

Implements [de.uulm.levazu.library.BudgetExceededDialogFragment.BudgetExceededDialogListener](#).

#### 3.4.2.3 void de.uulm.levazu.BudgetCategoryGroceriesActivity.onSaveButtonClicked ( View *view* )

callback method when save button in the UI is clicked gathers all settings from seek bars, puts them in a JSONArray and sends them to the database

Parameters

<i>view</i>	View associated with current object
-------------	-------------------------------------

#### 3.4.2.4 void de.uulm.levazu.BudgetCategoryGroceriesActivity.saveBudgetToDatabase ( boolean *newBudgetLimit* ) [private]

Gathers all budget settings for this category and saves them to the database

Parameters

<i>newBudgetLimit</i>	specifies if a new budget limit was set by user
-----------------------	---

#### 3.4.2.5 void de.uulm.levazu.BudgetCategoryGroceriesActivity.showBudgetExceededDialog ( )

shows dialog if current budget is exceeded



3.4.2.6 `int de.uulm.levazu.BudgetCategoryGroceriesActivity.totalGroceriesByDBEntires ( ) [private]`

Calculate total of entries retrieved from database

Returns

total

3.4.2.7 `int de.uulm.levazu.BudgetCategoryGroceriesActivity.totalGroceriesBySeekBar ( ) [private]`

Calculates total of all groceries SeekBars

Returns

total

3.4.2.8 `void de.uulm.levazu.BudgetCategoryGroceriesActivity.updateSeekBarOnChange ( final TextView total, final TextView totalText, final SeekBar sbTotal, int progress, TextView p ) [private]`

helper function to unify methods when SeekBar needs update after progress was changed

Parameters

<i>total</i>	TextView displaying total at top
<i>totalText</i>	TextView displaying total at bottom
<i>sbTotal</i>	SeekBar with total
<i>progress</i>	new value to which circle has to be moved
<i>p</i>	TextView indicating progress

3.4.2.9 `void de.uulm.levazu.BudgetCategoryGroceriesActivity.updateSeekBars ( double multi ) [protected]`

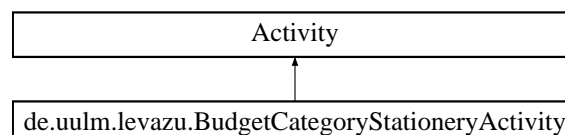
updates SeekBars percentaged to new max value

Parameters

<i>multi</i>	multiplier
--------------	------------

## 3.5 de.uulm.levazu.BudgetCategoryStationeryActivity Class Reference

Inheritance diagram for de.uulm.levazu.BudgetCategoryStationeryActivity:



### Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)

## Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

### 3.5.1 Detailed Description

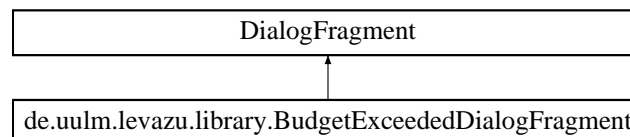
stub class for testing, can be filled like BudgetCategoryGroceriesActivity

Author

mike

## 3.6 de.uulm.levazu.library.BudgetExceededDialogFragment Class Reference

Inheritance diagram for de.uulm.levazu.library.BudgetExceededDialogFragment:



## Classes

- interface [BudgetExceededDialogListener](#)

## Public Member Functions

- void **onAttach** (Activity activity)
- Dialog **onCreateDialog** (Bundle savedInstanceState)

## Package Attributes

- [BudgetExceededDialogListener](#) **mListener**

### 3.6.1 Detailed Description

Displays dialog when budget is exceeded

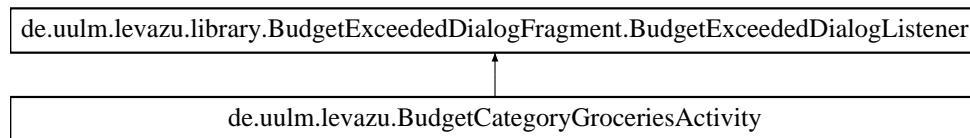
used by implementing BudgetExceededDialogListener and onDialogNegativeClick/onDialogPositiveClick to get what user has clicked (cancel/OK)

Author

Michael Legner

## 3.7 de.uulm.levazu.library.BudgetExceededDialogFragment.BudgetExceededDialogListener Interface Reference

Inheritance diagram for de.uulm.levazu.library.BudgetExceededDialogFragment.BudgetExceededDialogListener:



### Public Member Functions

- void **onDialogPositiveClick** (DialogFragment dialog)
- void **onDialogNegativeClick** (DialogFragment dialog)

#### 3.7.1 Detailed Description

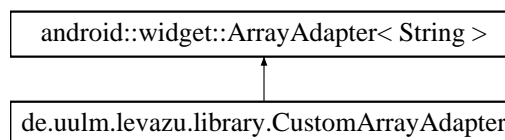
The activity that creates an instance of this dialog fragment must implement this interface in order to receive event callbacks. Each method passes the DialogFragment in case the host needs to query it.

#### Author

Michael Legner

## 3.8 de.uulm.levazu.library.CustomArrayAdapter Class Reference

Inheritance diagram for de.uulm.levazu.library.CustomArrayAdapter:



### Public Member Functions

- **CustomArrayAdapter** (Context pContext, String[] pValues)
- View **getView** (int position, View convertView, ViewGroup parent)

### Private Attributes

- final Context **context**
- final String[] **values**

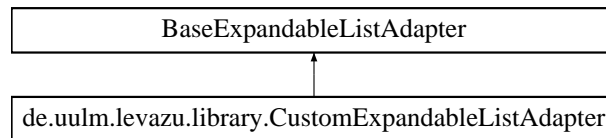
#### 3.8.1 Detailed Description

#### Author

vlad

## 3.9 de.uulm.levazu.library.CustomExpandableListAdapter Class Reference

Inheritance diagram for de.uulm.levazu.library.CustomExpandableListAdapter:



## Classes

- class [Group](#)

## Public Member Functions

- **CustomExpandableListAdapter** (Activity act, SparseArray< [Group](#) > groups)
- Object **getChild** (int groupPosition, int childPosition)
- long **getChildId** (int groupPosition, int childPosition)
- View **getChildView** (int groupPosition, final int childPosition, boolean isLastChild, View convertView, ViewGroup parent)
- int **getChildrenCount** (int groupPosition)
- Object **getGroup** (int groupPosition)
- int **getGroupCount** ()
- void **onGroupCollapsed** (int groupPosition)
- void **onGroupExpanded** (int groupPosition)
- long **getGroupId** (int groupPosition)
- View **getGroupView** (int groupPosition, boolean isExpanded, View convertView, ViewGroup parent)
- boolean **hasStableIds** ()
- boolean **isChildSelectable** (int groupPosition, int childPosition)

## Public Attributes

- LayoutInflater **inflater**
- Activity **activity**

## Private Attributes

- final SparseArray< [Group](#) > **groups**

## 3.10 de.uulm.levazu.MapActivity.DIRECTIONS\_STATUS\_CODES Enum Reference

### Public Attributes

- OK
- NOT\_FOUND
- ZERO\_RESULTS
- MAX\_WAYPOINTS\_EXCEEDED
- INVALID\_REQUEST
- OVER\_QUERY\_LIMIT
- REQUEST\_DENIED
- UNKNOWN\_ERROR

### 3.10.1 Detailed Description

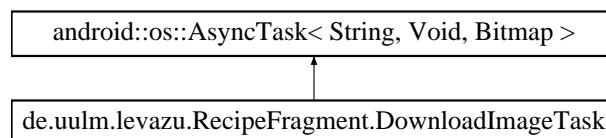
status codes returned by google directions api

Author

mike

## 3.11 de.uulm.levazu.RecipeFragment.DownloadImageTask Class Reference

Inheritance diagram for de.uulm.levazu.RecipeFragment.DownloadImageTask:



### Public Member Functions

- **DownloadImageTask** (ImageView bmlImage)

### Protected Member Functions

- Bitmap **doInBackground** (String...urls)
- void **onPostExecute** (Bitmap result)

### Package Attributes

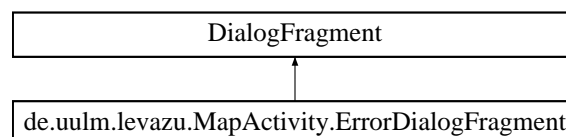
- ImageView **bmlImage**

### 3.11.1 Detailed Description

Usage: new DownloadImageTask(plmImage).execute(pURL); Downloads an image from the URL and puts it into the given plmImage

## 3.12 de.uulm.levazu.MapActivity.ErrorDialogFragment Class Reference

Inheritance diagram for de.uulm.levazu.MapActivity.ErrorDialogFragment:



### Public Member Functions

- [ErrorDialogFragment](#) ()
- void [setDialog](#) (Dialog dialog)
- Dialog **onCreateDialog** (Bundle savedInstanceState)

## Private Attributes

- Dialog **mDialog**

### 3.12.1 Detailed Description

showErrorDialog.

### 3.12.2 Constructor & Destructor Documentation

#### 3.12.2.1 `de.uulm.levazu.MapActivity.ErrorDialogFragment.ErrorDialogFragment ( )`

Default constructor. Sets the dialog field to null

### 3.12.3 Member Function Documentation

#### 3.12.3.1 `void de.uulm.levazu.MapActivity.ErrorDialogFragment.setDialog ( Dialog dialog )`

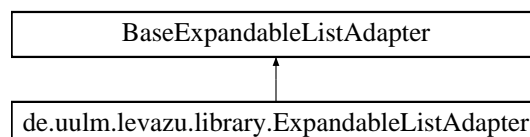
Set the dialog to display

Parameters

<i>dialog</i>	An error dialog
---------------	-----------------

## 3.13 `de.uulm.levazu.library.ExpandableListAdapter` Class Reference

Inheritance diagram for `de.uulm.levazu.library.ExpandableListAdapter`:



## Public Member Functions

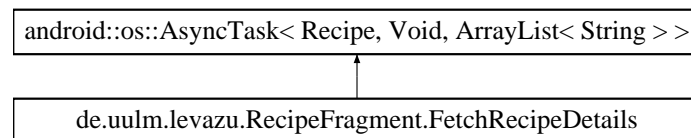
- **ExpandableListAdapter** (Context context, List< String > listDataHeader, HashMap< String, List< String >> listChildData)
- Object **getChild** (int groupPosition, int childPosition)
- long **getChildId** (int groupPosition, int childPosition)
- View **getChildView** (int groupPosition, final int childPosition, boolean isLastChild, View convertView, ViewGroup parent)
- int **getChildrenCount** (int groupPosition)
- Object **getGroup** (int groupPosition)
- int **getGroupCount** ()
- long **getGroupId** (int groupPosition)
- View **getGroupView** (int groupPosition, boolean isExpanded, View convertView, ViewGroup parent)
- boolean **hasStableIds** ()
- boolean **isChildSelectable** (int groupPosition, int childPosition)

### Private Attributes

- Context **\_context**
- List< String > **\_listDataHeader**
- HashMap< String, List< String > > **\_listDataChild**

## 3.14 de.uulm.levazu.RecipeFragment.FetchRecipeDetails Class Reference

Inheritance diagram for de.uulm.levazu.RecipeFragment.FetchRecipeDetails:



### Public Member Functions

- **FetchRecipeDetails** (LinearLayout pLinearLayout)

### Protected Member Functions

- ArrayList< String > **doInBackground** (Recipe...pRecipe)
- void **onPostExecute** (ArrayList< String > pResult)

### Package Attributes

- LinearLayout **mLayout**
- [Recipe](#) **mRecipe**

#### 3.14.1 Detailed Description

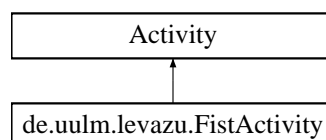
You can give this class a LinearLayout, wich will be filled async with the recipe details from our Yummly service.

#### Author

vlad

## 3.15 de.uulm.levazu.FistActivity Class Reference

Inheritance diagram for de.uulm.levazu.FistActivity:



## Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)
- boolean **onOptionsItemSelected** (MenuItem item)

## Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

## Private Member Functions

- void **setupActionBar** ()

### 3.15.1 Member Function Documentation

#### 3.15.1.1 void de.uulm.levazu.FistActivity.setupActionBar ( ) [private]

Set up the [android.app.ActionBar](#), if the API is available.

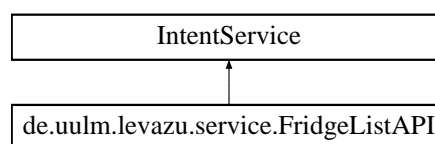
## 3.16 de.uulm.levazu.service.NotificationService.ForwardActivity Enum Reference

### Public Attributes

- **SHOPPINGLIST**
- **MAP**
- **BUDGET**
- **NORMAL**

## 3.17 de.uulm.levazu.service.FridgeListAPI Class Reference

Inheritance diagram for de.uulm.levazu.service.FridgeListAPI:



### Static Public Attributes

- static final String **FRIDGELIST** = "fridgelist"
- static final String **RESULT** = "result"
- static final String **NOTIFICATION** = "de.uulm.levazu.service.FridgeListAPI"

## Protected Member Functions

- void **onHandleIntent** (Intent intent)



### Private Member Functions

- void [publishResults](#) (int pResult, [Product](#)[] pFridgeItems)

### Private Attributes

- int **mResult** = Activity.RESULT\_CANCELED
- [Product](#)[] **mFridgeItems** = {}

### 3.17.1 Detailed Description

Author

vlad

### 3.17.2 Member Function Documentation

3.17.2.1 void de.uulm.levazu.service.FridgeListAPI.publishResults ( int *pResult*, [Product](#)[] *pFridgeItems* ) [private]

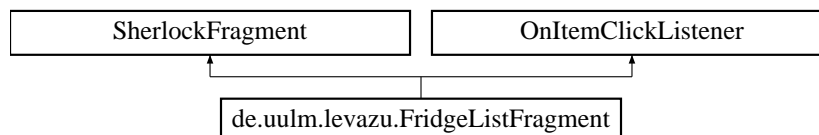
Creates an Intent with the results.

Parameters

<i>pResult</i>	
<i>pFridgeItems</i>	

## 3.18 de.uulm.levazu.FridgeListFragment Class Reference

Inheritance diagram for de.uulm.levazu.FridgeListFragment:



### Classes

- interface [OnFridgeItemSelectedListener](#)

### Public Member Functions

- **FridgeListFragment** (int pColour, float pWeight, int pMargin\_left, int pMargin\_right, int pMargin\_top, int pMargin\_bottom)
- void **onCreate** (Bundle pSavedInstanceState)
- View **onCreateView** (LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState)
- void **onAttach** (Activity activity)
- void **onStart** ()
- void **onPause** ()
- void **onResume** ()
- void **onSaveInstanceState** (Bundle outState)
- void **onItemClick** (AdapterView<?> pParent, View pView, int pPos, long pId)
- Object[] [getFridgeItems](#) ()

## Public Attributes

- BroadcastReceiver **mReceiver**

## Protected Member Functions

- String[] [getFridgeItemNames](#) ()

## Package Attributes

- int **marginRight**
- int **marginTop**
- int **marginBottom**

## Private Member Functions

- void **populateListView** (ArrayList< [Product](#) > pFridgeItems)
- boolean [displayProducts](#) (Bundle pBundle)

## Private Attributes

- LinearLayout [mLinearLayout](#)
- int **mColour**
- float **mWeight**
- int **marginLeft**
- ListView **mFridgelist**
- Object[] **mFridgeItems** = {}
- [OnFridgeItemSelectedListener](#) **mListener**

### 3.18.1 Detailed Description

Fragment which show the items in our fridge.

#### Author

vlad

### 3.18.2 Member Function Documentation

#### 3.18.2.1 boolean `de.uulm.levazu.FridgeListFragment.displayProducts ( Bundle pBundle )` [private]

##### Parameters

<i>pBundle</i>	
----------------	--

#### 3.18.2.2 String [] `de.uulm.levazu.FridgeListFragment.getFridgeItemNames ( )` [protected]

Returns the names of the items in the fridge as a String array.

##### Returns

String[]

## 3.18.2.3 Object [] de.uulm.levazu.FridgeListFragment.getFridgeItems ( )

returns the items on the fridgelist

## 3.18.3 Member Data Documentation

## 3.18.3.1 LinearLayout de.uulm.levazu.FridgeListFragment.mLinearLayout [private]

root layout of the fragment

## 3.18.3.2 BroadcastReceiver de.uulm.levazu.FridgeListFragment.mReceiver

**Initial value:**

```
= new BroadcastReceiver()
{
    @Override
    public void onReceive(Context pContext, Intent pIntent)
    {
        Bundle bundle = pIntent.getExtras();
        if (bundle != null)
        {
            int resultCode = bundle.getInt(FridgeListAPI.RESULT);
            if (resultCode == Activity.RESULT_OK)
            {
                displayProducts(bundle);
                Toast.makeText(getSherlockActivity(), "Request to FridgeListAPI complete.",
                    Toast.LENGTH_SHORT).show();
            }
            else
            {
                Toast.makeText(getSherlockActivity(), "Request to FridgeListAPI failed!",
                    Toast.LENGTH_SHORT).show();
            }
        }
    }
}
```

## 3.19 de.uulm.levazu.library.CustomExpandableListAdapter.Group Class Reference

## Public Member Functions

- **Group** (String string)

## Public Attributes

- String **string**
- final List< String > **children** = new ArrayList<String>()

## 3.20 de.uulm.levazu.library.Helper Class Reference

## Public Member Functions

- [Helper](#) ()
- void [displayToast](#) (Integer msgID, Context context)
- void [displayToast](#) (String str, Context context)
- Double [calcDistance](#) (LatLng curpos, LatLng dest)

## Static Public Member Functions

- static Object[] [resizeArray](#) (Object[] pArray)
- static String [arrayToString](#) (final String[] pStringArray)

### 3.20.1 Detailed Description

Class of miscellaneous helper functions

#### Author

Michael Legner

### 3.20.2 Constructor & Destructor Documentation

#### 3.20.2.1 `de.uulm.levazu.library.Helper.Helper ( )`

empty constructor, does nothing only needed to access methods

### 3.20.3 Member Function Documentation

#### 3.20.3.1 `static String de.uulm.levazu.library.Helper.arrayToString ( final String[] pStringArray )` `[static]`

Builds a String out of an Array

#### Parameters

<i>pStringArray</i>	
---------------------	--

#### Author

levazu

#### Returns

Array as String with "," separated

#### 3.20.3.2 `Double de.uulm.levazu.library.Helper.calcDistance ( LatLng curpos, LatLng dest )`

Calculates distance between two points

#### Parameters

<i>curpos</i>	Current position as LatLng
<i>dest</i>	Destination as LatLng

#### Returns

double value with distance in kilometers

#### 3.20.3.3 `void de.uulm.levazu.library.Helper.displayToast ( Integer msgID, Context context )`

Method to display toasts at the bottom of the screen

## Parameters

<i>msgID</i>	id to string in strings.xml
<i>context</i>	application context

3.20.3.4 void de.uulm.levazu.library.Helper.displayToast ( String *str*, Context *context* )

Methods to display toasts at the bottom of the screen

## Parameters

<i>str</i>	hard coded string
<i>context</i>	application context

3.20.3.5 static Object [] de.uulm.levazu.library.Helper.resizeArray ( Object[] *pArray* ) [static]

Resizes the given array by one slot.

## Parameters

<i>pArray</i>	
---------------	--

## Author

levazu

## Returns

## 3.21 de.uulm.levazu.library.JSONParser Class Reference

## Public Member Functions

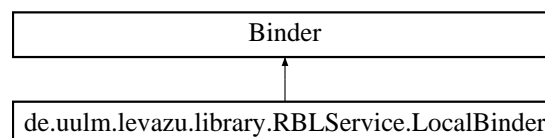
- JSONObject **getJSONFromUrl** (String url, List< NameValuePair > params)

## Static Package Attributes

- static InputStream **inptstream** = null
- static JSONObject **jObj** = null
- static String **json** = ""

## 3.22 de.uulm.levazu.library.RBLService.LocalBinder Class Reference

Inheritance diagram for de.uulm.levazu.library.RBLService.LocalBinder:



## Public Member Functions

- [RBLService](#) **getService** ()

### 3.22.1 Detailed Description

Binds RBLService to App

Author

Michael Legner

## 3.23 de.uulm.levazu.library.LocationServiceErrorMessages Class Reference

### Static Public Member Functions

- static String **getErrorString** (Context context, int errorCode)

### 3.23.1 Detailed Description

Map error codes to error messages.

## 3.24 de.uulm.levazu.library.LocationUtils Class Reference

### Static Public Member Functions

- static String [getLatLng](#) (Context context, Location currentLocation)

### Static Public Attributes

- static final String **APPTAG** = "LocationSample"
- static final String **SHARED\_PREFERENCES**
- static final String **KEY\_UPDATES\_REQUESTED**
- static final int **CONNECTION\_FAILURE\_RESOLUTION\_REQUEST** = 9000
- static final int **MILLISECONDS\_PER\_SECOND** = 1000
- static final int **UPDATE\_INTERVAL\_IN\_SECONDS** = 5
- static final int **FAST\_CEILING\_IN\_SECONDS** = 1
- static final long **UPDATE\_INTERVAL\_IN\_MILLISECONDS**
- static final long **FAST\_INTERVAL\_CEILING\_IN\_MILLISECONDS**
- static final String **EMPTY\_STRING** = new String()

### 3.24.1 Detailed Description

Defines app-wide constants and utilities

### 3.24.2 Member Function Documentation

- 3.24.2.1 static String de.uulm.levazu.library.LocationUtils.getLatLng ( Context *context*, Location *currentLocation* )  
[static]

Get the latitude and longitude from the Location object returned by Location Services.

## Parameters

<i>currentLocation</i>	A Location object containing the current location
------------------------	---

## Returns

The latitude and longitude of the current location, or null if no location is available.

## 3.24.3 Member Data Documentation

3.24.3.1 `final long de.uulm.levazu.library.LocationUtils.FAST_INTERVAL_CEILING_IN_MILLISECONDS` [static]

## Initial value:

```
=
    MILLISECONDS_PER_SECOND * FAST_CEILING_IN_SECONDS
```

3.24.3.2 `final String de.uulm.levazu.library.LocationUtils.KEY_UPDATES_REQUESTED` [static]

## Initial value:

```
=
    "com.example.android.location.KEY_UPDATES_REQUESTED"
```

3.24.3.3 `final String de.uulm.levazu.library.LocationUtils.SHARED_PREFERENCES` [static]

## Initial value:

```
=
    "com.example.android.location.SHARED_PREFERENCES"
```

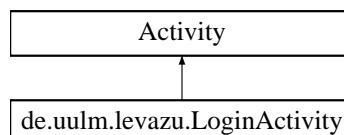
3.24.3.4 `final long de.uulm.levazu.library.LocationUtils.UPDATE_INTERVAL_IN_MILLISECONDS` [static]

## Initial value:

```
=
    MILLISECONDS_PER_SECOND * UPDATE_INTERVAL_IN_SECONDS
```

## 3.25 de.uulm.levazu.LoginActivity Class Reference

Inheritance diagram for de.uulm.levazu.LoginActivity:



## Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)

## Static Public Attributes

- static [UserPreferences](#) **userPreferences**

## Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)
- void **onNewIntent** (Intent intent)

## Package Attributes

- Button **btnLogin**
- Button **btnLoginWithoutInternet**
- EditText **txtEmail**
- EditText **txtPassword**
- TextView **lblErrMsg**
- Bundle **autoLoginInformation** = new Bundle()

## Private Member Functions

- void [loginUser](#) (String eMail, String passWord, [ForwardActivity](#) forwardActivity)
- void [startNotificationService](#) (String eMail, String passWord, String uid)

## Static Private Attributes

- static String **KEY\_SUCCESS** = "success"
- static String **KEY\_ERROR** = "error"
- static String **KEY\_ERROR\_MSG** = "error\_msg"
- static String **KEY\_UID** = "id"
- static String **KEY\_NAME** = "name"
- static String **KEY\_EMAIL** = "email"
- static String **KEY\_CREATED\_AT** = "created\_at"
- static String **KEY\_TOKEN** = "token"
- static String **KEY\_LAT** = "lat"
- static String **KEY\_LNG** = "lng"
- static String **KEY\_DEMOSTEP** = "demoStep"
- static int **SHOPPING\_NOTIFICATION** = 1111
- static int **GPS\_NOTIFICATION** = 2222

### 3.25.1 Member Function Documentation

3.25.1.1 void `de.uulm.levazu.LoginActivity.loginUser` ( String *eMail*, String *passWord*, [ForwardActivity](#) *forwardActivity* )  
[private]

Login of a user given by eMail and passWord. Also forwards the user to a certain activity

#### Parameters

<i>eMail</i>	
--------------	--



<i>passWord</i>	
<i>forwardActivity</i>	

3.25.1.2 void de.uulm.levazu.LoginActivity.startNotificationService ( String *eMail*, String *passWord*, String *uld* )  
[private]

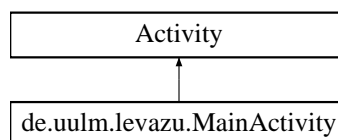
Starts the NotificationService for a user given by eMail, passWord and uld

Parameters

<i>eMail</i>	
<i>passWord</i>	
<i>uld</i>	

## 3.26 de.uulm.levazu.MainActivity Class Reference

Inheritance diagram for de.uulm.levazu.MainActivity:



### Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)
- boolean **onOptionsItemSelected** (MenuItem item)
- void **openShoppingList** (View view)
- void **openMap** (View view)
- void **openBudget** (View view)
- void **openSettings** (View view)
- void **openScan** (View view)
- void **openFist** (View view)

### Static Public Attributes

- static [WebAPI](#) **WEBAPI**
- static [UserPreferences](#) **userPreferences**
- static Object[] [mGlobalProducts](#) = null

### Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

### Package Attributes

- [Budget](#) **budget**
- Bundle **forwardInformation**

### Private Member Functions

- void **openShoppingList** ()
- void **openMap** ()
- void **openBudget** ()
- void **openSettings** ()
- void **openScan** ()
- void **openFist** ()

#### 3.26.1 Detailed Description

Author

vlad

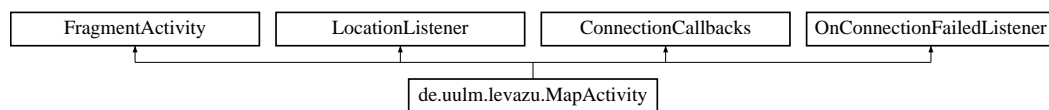
#### 3.26.2 Member Data Documentation

3.26.2.1 Object [] `de.uulm.levazu.MainActivity.mGlobalProducts = null` [static]

The current products in our APP and on our shoppinglist. Accessible from everywhere.

### 3.27 de.uulm.levazu.MapActivity Class Reference

Inheritance diagram for de.uulm.levazu.MapActivity:



### Classes

- enum [DIRECTIONS\\_STATUS\\_CODES](#)
- class [AlertDialogFragment](#)

### Public Member Functions

- void **onStop** ()
- void **onPause** ()
- void **onStart** ()
- void **onResume** ()
- void [onToggleUpdatesClicked](#) (View v)
- boolean **onCreateOptionsMenu** (Menu menu)
- boolean **onOptionsItemSelected** (MenuItem item)
- void [onConnectionFailed](#) (ConnectionResult connectionResult)
- void [onConnected](#) (Bundle bundle)
- void [onManualRouteButtonClicked](#) (View v)
- void [onDisconnected](#) ()
- void [onLocationChanged](#) (Location location)
- void [sendMapNotification](#) ()
- void [onDemoButtonClicked](#) (View view)

## Static Public Attributes

- static String **DIRECTIONS\_API\_URL** = "http://maps.googleapis.com/maps/api/directions/json"

## Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)
- void **onActivityResult** (int requestCode, int resultCode, Intent intent)

## Package Attributes

- double **maxdistance** = 0.0
- double **tmpdistance** = 0.0
- [Helper](#) **h** = new [Helper](#)()
- Location **nearestShopLocation**
- float **distanceToNearestShop**
- [Shop](#) **nearestShop**
- boolean **nearestShopNotificationSend** = false
- int **demoStep** = 0

## Static Package Attributes

- static final LatLng **CoordEselsbergCenter** = new LatLng(48.422786, 9.953097)
- static final LatLng **CoordMuensterPlatz** = new LatLng(48.398526, 9.991276)

## Private Member Functions

- void **drawMarkers** (LatLng start, Double distance)
- void **startPeriodicUpdates** ()
- void **stopPeriodicUpdates** ()
- boolean **servicesConnected** ()
- void **showErrorDialog** (int errorCode)
- void **setupActionBar** ()
- HashMap< Integer, [Shop](#) > **getShops** ()
- void **createMarkers** (HashMap< Integer, [Shop](#) > hm)
- void **getRoute** (HashMap< Integer, [Shop](#) > hm, LatLng startPosition)
- void **generateRoute** (LatLng start, Double distance)
- List< LatLng > **decodePoly** (String encoded)
- String **downloadFromUrl** (String strUrl) throws IOException
- HashMap< Integer, [Shop](#) > **filterShopsByShoppinglist** (HashMap< Integer, [Shop](#) > shops)
- HashMap< Integer, [Shop](#) > **filterShopsByDistance** (HashMap< Integer, [Shop](#) > shops, double maxdis, LatLng start)
- JSONArray **getShoppinglist** (int uid)
- void **checkForShopsNearby** (Location location)
- void **setDemoLocation** (Double lat, Double lng)

## Private Attributes

- LocationClient **mLocationClient**
- LocationRequest **mLocationRequest**
- GoogleMap **map**
- boolean **mUpdatesRequested**
- SharedPreferences **mPrefs**
- SharedPreferences.Editor **mEditor**
- LatLng **home** = null
- LatLng **CurrentLocation** = null
- Marker **CurrentLocationMarker** = null
- HashMap< Integer, Shop > **AllShops** = null
- HashMap< Integer, Shop > **UserShops** = null
- ToggleButton **toggleUpdatesButton**

## Static Private Attributes

- static String **API\_URL** = "http://mobile1.informatik.uni-ulm.de/websrv/"

### 3.27.1 Detailed Description

activity to display a map of current surroundings of the user. can display shops with items on the users' shopping list and generate a route

#### Author

Michael Legner

### 3.27.2 Member Function Documentation

#### 3.27.2.1 void de.uulm.levazu.MapActivity.checkForShopsNearby ( Location *location* ) [private]

Checks if shops with products on shoppinglist are in reach

##### Parameters

<i>location</i>	
-----------------	--

#### 3.27.2.2 void de.uulm.levazu.MapActivity.createMarkers ( HashMap< Integer, Shop > *hm* ) [private]

Creates markers on map for shops from data in hash map

##### Parameters

<i>hm</i>	hash map with shops
-----------	---------------------

#### 3.27.2.3 List<LatLng> de.uulm.levazu.MapActivity.decodePoly ( String *encoded* ) [private]

Method to decode polyline points Courtesy : [jeffreysambells.com/2010/05/27/decoding-polylines-from-google-maps-direction-api-with-java](http://jeffreysambells.com/2010/05/27/decoding-polylines-from-google-maps-direction-api-with-java)

## Parameters

<i>encoded</i>	polyline encoded as string
----------------	----------------------------

## Returns

list of points as pairs of latitude and longitude

3.27.2.4 String de.uulm.levazu.MapActivity.downloadFromUrl ( String *strUrl* ) throws IOException [private]

Downloads output of an URL into a String Using a WebAPI call results in empty response, no idea why Source: <http://wptrafficanalyzer.in/blog/driving-distance-and-travel-time-duration-between-two-l>

## Parameters

<i>strUrl</i>	complete URL to get, including parameters and formatting
---------------	--

## Returns

String with result

## Exceptions

<i>IOException</i>	
--------------------	--

3.27.2.5 void de.uulm.levazu.MapActivity.drawMarkers ( LatLng *start*, Double *distance* ) [private]

Invoked by "Markers" toggle button Stars markers or clears map of them

## Parameters

<i>start</i>	starting point as LatLng
<i>distance</i>	distance set

3.27.2.6 HashMap<Integer, Shop> de.uulm.levazu.MapActivity.filterShopsByDistance ( HashMap< Integer, Shop > *shops*, double *maxdis*, LatLng *start* ) [private]

Filters HashMap with shops by distance, eliminating shops exceeding maximal distance set by user

## Parameters

<i>shops</i>	HashMap with shops
<i>maxdis</i>	Maximal distance set by user in kilometers
<i>start</i>	starting point as LatLng

## Returns

filtered HashMap

3.27.2.7 HashMap<Integer, Shop> de.uulm.levazu.MapActivity.filterShopsByShoppinglist ( HashMap< Integer, Shop > *shops* ) [private]

Filter HashMap with shops to let only those with products in them

## Parameters

<i>shops</i>	hashmap containing shops
--------------	--------------------------

## Returns

hashmap with shops that have products Filters shops from hashmaps which don't have products currently on users shopping list

## Parameters

<i>shops</i>	hashmap containing shops
--------------	--------------------------

## Returns

filtered hashmap Filters shops which are not with products on shopping list associated, leaving only those which match all criteria

## Parameters

<i>shops</i>	hashmap with shops
--------------	--------------------

## Returns

filtered hashmap

### 3.27.2.8 void de.uulm.levazu.MapActivity.generateRoute ( LatLng *start*, Double *distance* ) [private]

Generates a route and displays it on map as red polyline

## Parameters

<i>start</i>	starting point as LatLng
<i>distance</i>	distance set

### 3.27.2.9 void de.uulm.levazu.MapActivity.getRoute ( HashMap< Integer, Shop > *hm*, LatLng *startPosition* ) [private]

creates route for shopping tour origin is current location of user, destination is the shop with the largest distance to origin all shops in between are used as waypoints depending on their distance

## Parameters

<i>hm</i>	hash map with shops
<i>startPosition</i>	LatLng object with current position

Traversing all routes

Traversing all legs

### 3.27.2.10 JSONArray de.uulm.levazu.MapActivity.getShoppinglist ( int *uid* ) [private]

gets products on current users shopping list

## Parameters

---

<i>uid</i>	user id
------------	---------

**Returns**

string array with names of products get shoppinglist of user from database

**Parameters**

<i>uid</i>	User ID
------------	---------

**Returns**

shoppinglist as JSONArray

### 3.27.2.11 `HashMap<Integer, Shop> de.uulm.levazu.MapActivity.getShops ( )` [private]

gets shops from database and puts them in a hashmap index is same as id in database, not a continuous number!  
Use an iterator to go through hashmap

**Returns**

hashmap with shops

### 3.27.2.12 `void de.uulm.levazu.MapActivity.onActivityResult ( int requestCode, int resultCode, Intent intent )` [protected]

Handle results returned to this Activity by other Activities started with `startActivityForResult()`. In particular, the method `onConnectionFailed()` in `LocationUpdateRemover` and `LocationUpdateRequester` may call `startResolutionForResult()` to start an Activity that handles Google Play services problems. The result of this call returns here, to `onActivityResult`.

### 3.27.2.13 `void de.uulm.levazu.MapActivity.onConnected ( Bundle bundle )`

Called by Location Services when the request to connect the client finishes successfully. At this point, the current location can be requested and periodic updates are possible

**Parameters**

<i>bundle</i>	bundle thingy
---------------	---------------

### 3.27.2.14 `void de.uulm.levazu.MapActivity.onConnectionFailed ( ConnectionResult connectionResult )`

Called by Location Services if the attempt to Location Services fails.

**Parameters**

<i>connection-Result</i>	
--------------------------	--

### 3.27.2.15 `void de.uulm.levazu.MapActivity.onDemoButtonClicked ( View view )`

Button for demo, fakes current coordinates

## Parameters

<i>view</i>	Current view associated with the object, in this case a button
-------------	--

## 3.27.2.16 void de.uulm.levazu.MapActivity.onDisconnected ( )

Called by Location Services if the connection to the location client drops because of an error.

3.27.2.17 void de.uulm.levazu.MapActivity.onLocationChanged ( Location *location* )

Reports to the UI that the location was updated

## Parameters

<i>location</i>	The updated location.
-----------------	-----------------------

3.27.2.18 void de.uulm.levazu.MapActivity.onManualRouteButtonClicked ( View *v* )

Generates new route from current location and draws it on the map

## Parameters

<i>v</i>	view associated with current object
----------	-------------------------------------

3.27.2.19 void de.uulm.levazu.MapActivity.onToggleUpdatesClicked ( View *v* )

Invoked by "Updates" toggle button - makes the UI a bit smoother Starts or stops location updates

## Parameters

<i>v</i>	The view object associated with this method, in this case a ToggleButton.
----------	---

## 3.27.2.20 void de.uulm.levazu.MapActivity.sendMapNotification ( )

Sends notification if near a shop with products on shoppinglist and in reach

## 3.27.2.21 boolean de.uulm.levazu.MapActivity.servicesConnected ( ) [private]

Verify that Google Play services is available before making a request.

## Returns

true if Google Play services is available, otherwise false

3.27.2.22 void de.uulm.levazu.MapActivity.setDemoLocation ( Double *lat*, Double *lng* ) [private]

Sets location variables to specified values, used in Demo and Evaluation Should not be called in real version!

## Parameters



<i>lat</i>	Latitude as Double
<i>lng</i>	Longitude as Double

3.27.2.23 void de.uulm.levazu.MapActivity.setupActionBar ( ) [private]

Set up the [android.app.ActionBar](#), if the API is available.

3.27.2.24 void de.uulm.levazu.MapActivity.showErrorDialog ( int *errorCode* ) [private]

Show a dialog returned by Google Play services for the connection error code

Parameters

<i>errorCode</i>	An error code returned from onConnectionFailed
------------------	--

3.27.2.25 void de.uulm.levazu.MapActivity.startPeriodicUpdates ( ) [private]

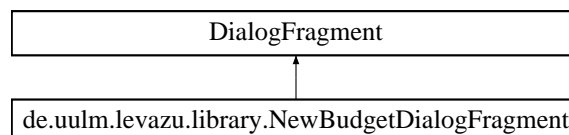
In response to a request to start updates, send a request to Location Services

3.27.2.26 void de.uulm.levazu.MapActivity.stopPeriodicUpdates ( ) [private]

In response to a request to stop updates, send a request to Location Services

## 3.28 de.uulm.levazu.library.NewBudgetDialogFragment Class Reference

Inheritance diagram for de.uulm.levazu.library.NewBudgetDialogFragment:



### Classes

- interface [NewBudgetDialogListener](#)

### Public Member Functions

- void **onAttach** (Activity activity)
- Dialog **onCreateDialog** (Bundle savedInstanceState)

### Package Attributes

- [NewBudgetDialogListener](#) **mListener**

### 3.28.1 Detailed Description

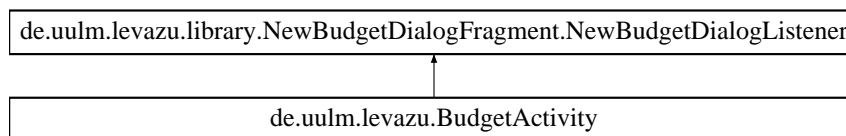
displays dialog if no budget for the user was found

Author

mike

## 3.29 de.uulm.levazu.library.NewBudgetDialogFragment.NewBudgetDialogListener Interface Reference

Inheritance diagram for de.uulm.levazu.library.NewBudgetDialogFragment.NewBudgetDialogListener:



### Public Member Functions

- void **onDialogPositiveClick** (DialogFragment dialog)
- void **onDialogNegativeClick** (DialogFragment dialog)

### 3.29.1 Detailed Description

The activity that creates an instance of this dialog fragment must implement this interface in order to receive event callbacks. Each method passes the DialogFragment in case the host needs to query it.

## 3.30 de.uulm.levazu.library.NotificationBuilder Class Reference

### Public Member Functions

- [NotificationBuilder](#) (Context context, HashMap< String, String > u, [ForwardActivity](#) c, JSONArray loggedInUserPreferences)
- void [initiateNotification](#) ()

### Package Attributes

- Intent **nIntent**
- Context **nContext**
- JSONArray **preferences**
- int **notifications**
- HashMap< String, String > **user** = new HashMap<String, String>()
- [ForwardActivity](#) **category**
- NotificationCompat.Builder **notification**
- NotificationManager **mNotificationManager**

### Static Package Attributes

- static int **notificationIndex** =0

## Private Member Functions

- void **setupMapNotification** ()
- void **setupShoppingListNotification** ()

## 3.30.1 Constructor & Destructor Documentation

3.30.1.1 **de.uulm.levazu.library.NotificationBuilder.NotificationBuilder** ( Context *context*, HashMap< String, String > *u*, ForwardActivity *c*, JSONArray *loggedInUserPreferences* )

Creates a notification initiated by NotificationService

### Parameters

<i>context</i>	Application context
<i>u</i>	User information like id, email and password
<i>c</i>	Which activity should open, by clicking the notification
<i>loggedInUserPreferences</i>	

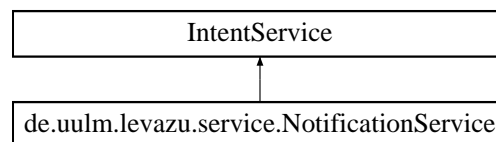
## 3.30.2 Member Function Documentation

3.30.2.1 void **de.uulm.levazu.library.NotificationBuilder.initiateNotification** ( )

Building a notification for a certain context, e.g. Shopping notification

## 3.31 de.uulm.levazu.service.NotificationService Class Reference

Inheritance diagram for de.uulm.levazu.service.NotificationService:



## Classes

- enum [ForwardActivity](#)

## Public Member Functions

- void **onDestroy** ()

## Static Public Attributes

- static int **shoppingNotificationSequenzNumber** =0

## Protected Member Functions

- void **onHandleIntent** (Intent intent)

## Package Attributes

- [WebAPI](#) **webAPI**
- Context **context**
- [NotificationBuilder](#) **nBuilder**

## Private Member Functions

- void [checkShoppingList](#) ()
- void **checkBudget** ()
- void **checkLocation** ()
- void [setUserDetails](#) (Intent intent)

## Private Attributes

- HashMap< String, String > **user** = new HashMap<String, String>()
- JSONObject **shoppingList**
- JSONObject **loadedShoppingList**
- JSONArray **loggedInUserPreferences**

### 3.31.1 Detailed Description

Service for notifications, like shopping notifications.

#### Author

Andreas Blezu

### 3.31.2 Member Function Documentation

3.31.2.1 void `de.uulm.levazu.service.NotificationService.checkShoppingList ( )` [private]

Loads shoppinglist of a user and starts a notification

3.31.2.2 void `de.uulm.levazu.service.NotificationService.setUserDetails ( Intent intent )` [private]

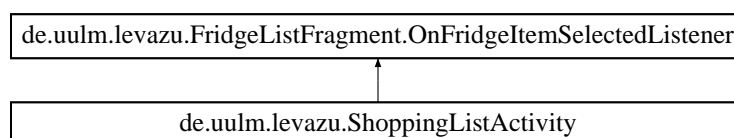
Saving user details like email, password and id

#### Parameters

<i>intent</i>	
---------------	--

## 3.32 de.uulm.levazu.FridgeListFragment.OnFridgeItemSelectedListener Interface Reference

Inheritance diagram for `de.uulm.levazu.FridgeListFragment.OnFridgeItemSelectedListener`:

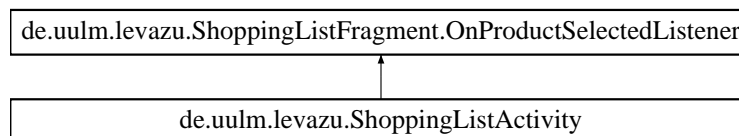


**Public Member Functions**

- void **onFridgeItemSelected** (int pIndex)

**3.33 de.uulm.levazu.ShoppingListFragment.OnProductSelectedListener Interface Reference**

Inheritance diagram for de.uulm.levazu.ShoppingListFragment.OnProductSelectedListener:

**Public Member Functions**

- void **onProductSelected** (int pIndex)
- void **onProductLongPressed** (int pIndex)

**3.34 de.uulm.levazu.ShoppingListActivity.PERSPECTIVE Enum Reference****Public Attributes**

- **SHOPPINGLIST**
- **SHOPPINGLIST\_AND\_RECIPES**
- **FRIDGE**
- **RECIPES**

**3.35 de.uulm.levazu.library.PreferencesDialogManager Class Reference****Public Member Functions**

- Boolean **getChangedPreferences** ()
- void **setChangedPreferences** (Boolean changedPreferences)
- **PreferencesDialogManager** ([UserPreferences](#) userPref)
- String **getKategorie** ()
- void **setKategorie** (String kategorie)
- Context **getContext** ()
- void **setContext** (Context context)
- AlertDialog **createDialog** ()

**Public Attributes**

- [UserPreferences](#) **userPreferences**

## Package Attributes

- int **oldNut**
- int **nutritionStyle**
- double **distance**
- int **maxCalories**
- int **oldCalories**
- int **notifications**
- int **notificationRate**

## Private Attributes

- String **categorie**
- Builder **builder**
- Context **context**
- Boolean **changedPreferences** = false

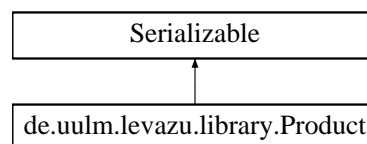
### 3.35.1 Detailed Description

Author

Andy

## 3.36 de.uulm.levazu.library.Product Class Reference

Inheritance diagram for de.uulm.levazu.library.Product:



## Public Member Functions

- int **getmAmount** ()
- void **setmAmount** (int [mAmount](#))
- **Product** (String pName)
- **Product** (String pProductId, String pShoppingListId, String pProductName, String plsIngredient)
- **Product** (String pProductId, String pShoppingListId, String pProductName, String plsIngredient, String p-Price)
- **Product** (String pProductId, String pShoppingListId, String pProductName, String plsIngredient, String p-Price, String[] pTags)
- **Product** (String pProductId, String pShoppingListId, String pProductListId, String pProductName, String p-ProductCategory, String plsIngredient, String pPrice, String[] pTags)
- int **getId** ()
- String **getName** ()
- String **getmCategory** ()
- void **setmCategory** (String [mCategory](#))
- int **getmProductListId** ()
- boolean **isIngredient** ()
- Double **getPrice** ()

- void **setPrice** (double pPrice)
- String[] **getTags** ()
- boolean[] **getmRegisteredTagIndexes** ()
- void **setmRegisteredTagIndexes** (boolean[] mRegisteredTagIndexes)
- boolean **isInBasket** ()
- void **setInBasket** (boolean inBasket)
- void **addTag** (String pProductTag)
- boolean **containsTag** (String pTag)

### Private Attributes

- int mId
- int mShoppingListId
- int mProductListId
- String mName
- String mCategory
- int mIsIngredient
- double mPrice
- String[] mTags
- boolean[] mRegisteredTagIndexes
- boolean inBasket = false
- int mAmount = 0

### Static Private Attributes

- static final long **serialVersionUID** = 1L

### 3.36.1 Detailed Description

Represents a product.

Author

vlad

### 3.36.2 Member Data Documentation

3.36.2.1 **boolean de.uulm.levazu.library.Product.inBasket = false** [private]

True if product is in shopping basket

3.36.2.2 **int de.uulm.levazu.library.Product.mAmount = 0** [private]

Amount of pieces of a Product in the Basket

3.36.2.3 **String de.uulm.levazu.library.Product.mCategory** [private]

Name of the product

3.36.2.4 **int de.uulm.levazu.library.Product.mId** [private]

unique ID of the product

3.36.2.5 `int de.uulm.levazu.library.Product.mIsIngredient [private]`

Is this product an ingredient ? [0: false 1: true]

3.36.2.6 `String de.uulm.levazu.library.Product.mName [private]`

Name of the product

3.36.2.7 `double de.uulm.levazu.library.Product.mPrice [private]`

The Price of the product

3.36.2.8 `int de.uulm.levazu.library.Product.mProductListId [private]`

unique ID of the productList to which the product belongs

3.36.2.9 `boolean [] de.uulm.levazu.library.Product.mRegisteredTagIndexes [private]`

Array to save which tag was already registered

3.36.2.10 `int de.uulm.levazu.library.Product.mShoppingListId [private]`

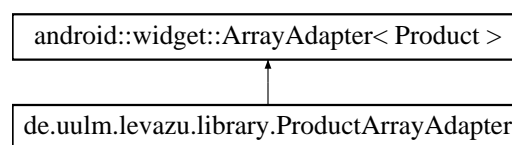
unique ID of the shoppinglist to which the product belongs

3.36.2.11 `String [] de.uulm.levazu.library.Product.mTags [private]`

The Tag of the product

### 3.37 de.uulm.levazu.library.ProductArrayAdapter Class Reference

Inheritance diagram for de.uulm.levazu.library.ProductArrayAdapter:



#### Public Member Functions

- **ProductArrayAdapter** (Context pContext, ArrayList< [Product](#) > pProducts)
- View **getView** (int pPosition, View pConvertView, ViewGroup pParent)
- void **add** ([Product](#) object)
- void **markProduct** (int pPosition)
- ArrayList< [Product](#) > **getProducts** ()



## Private Attributes

- final Context **mContext**
- final ArrayList< [Product](#) > **mProducts**
- final LayoutInflater **mInflater**

### 3.37.1 Detailed Description

Adapter for products.

Author

vlad

### 3.37.2 Member Function Documentation

3.37.2.1 ArrayList<[Product](#)> de.uulm.levazu.library.ProductArrayAdapter.getProducts ( )

Returns

3.37.2.2 void de.uulm.levazu.library.ProductArrayAdapter.markProduct ( int *pPosition* )

Mark a product.

Parameters

<i>pPosition</i>	
------------------	--

## 3.38 de.uulm.levazu.library.RBLGattAttributes Class Reference

### Static Public Member Functions

- static String [lookup](#) (String uuid, String defaultName)

### Static Public Attributes

- static String **CLIENT\_CHARACTERISTIC\_CONFIG** = "00002902-0000-1000-8000-00805f9b34fb"
- static String **BLE\_SHIELD\_TX** = "713d0003-503e-4c75-ba94-3148f18d941e"
- static String **BLE\_SHIELD\_RX** = "713d0002-503e-4c75-ba94-3148f18d941e"
- static String **BLE\_SHIELD\_SERVICE** = "713d0000-503e-4c75-ba94-3148f18d941e"

### Static Package Functions

- **[static initializer]**

### Static Private Attributes

- static HashMap< String, String > **attributes** = new HashMap<String, String>()

### 3.38.1 Detailed Description

This class includes a small subset of standard GATT attributes for demonstration purposes.

### 3.38.2 Member Function Documentation

3.38.2.1 `static String de.uulm.levazu.library.RBLGattAttributes.lookup ( String uuid, String defaultName )` `[static]`

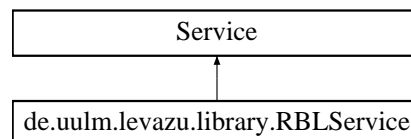
Parameters

<i>uuid</i>	
<i>defaultName</i>	

Returns

## 3.39 de.uulm.levazu.library.RBLService Class Reference

Inheritance diagram for de.uulm.levazu.library.RBLService:



### Classes

- class [LocalBinder](#)

### Public Member Functions

- IBinder **onBind** (Intent intent)
- boolean **onUnbind** (Intent intent)
- boolean [initialize](#) ()
- boolean [connect](#) (final String address)
- void [disconnect](#) ()
- void [close](#) ()
- void [readCharacteristic](#) (BluetoothGattCharacteristic characteristic)
- void **readRssi** ()
- void [writeCharacteristic](#) (BluetoothGattCharacteristic characteristic)
- void [setCharacteristicNotification](#) (BluetoothGattCharacteristic characteristic, boolean enabled)
- BluetoothGattService [getSupportedGattService](#) ()

### Static Public Attributes

- static final String **ACTION\_GATT\_CONNECTED** = "ACTION\_GATT\_CONNECTED"
- static final String **ACTION\_GATT\_DISCONNECTED** = "ACTION\_GATT\_DISCONNECTED"
- static final String **ACTION\_GATT\_SERVICES\_DISCOVERED** = "ACTION\_GATT\_SERVICES\_DISCOVERED"
- static final String **ACTION\_GATT\_RSSI** = "ACTION\_GATT\_RSSI"

- static final String **ACTION\_DATA\_AVAILABLE** = "ACTION\_DATA\_AVAILABLE"
- static final String **EXTRA\_DATA** = "EXTRA\_DATA"
- static final UUID **UUID\_BLE\_SHIELD\_TX**
- static final UUID **UUID\_BLE\_SHIELD\_RX**
- static final UUID **UUID\_BLE\_SHIELD\_SERVICE**

### Private Member Functions

- void [broadcastUpdate](#) (final String action)
- void [broadcastUpdate](#) (final String action, int rssi)
- void [broadcastUpdate](#) (final String action, final BluetoothGattCharacteristic characteristic)

### Private Attributes

- BluetoothManager **mBluetoothManager**
- BluetoothAdapter **mBluetoothAdapter**
- String **mBluetoothDeviceAddress**
- BluetoothGatt **mBluetoothGatt**
- final BluetoothGattCallback **mGattCallback**
- final IBinder **mBinder** = new [LocalBinder](#)()

### Static Private Attributes

- static final String **TAG** = RBLService.class.getSimpleName()

## 3.39.1 Detailed Description

Service for managing connection and data communication with a GATT server hosted on a given Bluetooth LE device.

## 3.39.2 Member Function Documentation

3.39.2.1 void de.uulm.levazu.library.RBLService.broadcastUpdate ( final String *action* ) [private]

Parameters

<i>action</i>	
---------------	--

3.39.2.2 void de.uulm.levazu.library.RBLService.broadcastUpdate ( final String *action*, int *rssi* ) [private]

Parameters

<i>action</i>	
<i>rssi</i>	

3.39.2.3 void de.uulm.levazu.library.RBLService.broadcastUpdate ( final String *action*, final BluetoothGattCharacteristic *characteristic* ) [private]

## Parameters

<i>action</i>	
<i>characteristic</i>	

## 3.39.2.4 void de.uulm.levazu.library.RBLService.close ( )

After using a given BLE device, the app must call this method to ensure resources are released properly.

3.39.2.5 boolean de.uulm.levazu.library.RBLService.connect ( final String *address* )

Connects to the GATT server hosted on the Bluetooth LE device.

## Parameters

<i>address</i>	The device address of the destination device.
----------------	---

## Returns

Return true if the connection is initiated successfully. The connection result is reported asynchronously through the

```
BluetoothGattCallback#onConnectionStateChange(android.bluetooth.BluetoothGatt, int, int)
```

callback.

## 3.39.2.6 void de.uulm.levazu.library.RBLService.disconnect ( )

Disconnects an existing connection or cancel a pending connection. The disconnection result is reported asynchronously through the

```
BluetoothGattCallback#onConnectionStateChange(android.bluetooth.BluetoothGatt, int, int)
```

callback.

## 3.39.2.7 BluetoothGattService de.uulm.levazu.library.RBLService.getSupportedGattService ( )

## Returns

## 3.39.2.8 boolean de.uulm.levazu.library.RBLService.initialize ( )

Initializes a reference to the local Bluetooth adapter.

## Returns

Return true if the initialization is successful.

3.39.2.9 void de.uulm.levazu.library.RBLService.readCharacteristic ( BluetoothGattCharacteristic *characteristic* )

Request a read on a given

```
BluetoothGattCharacteristic
```

. The read result is reported asynchronously through the

```
BluetoothGattCallback#onCharacteristicRead(android.bluetooth.BluetoothGatt, android.bluetooth.  
BluetoothGattCharacteristic, int)
```

callback.

## Parameters

<i>characteristic</i>	The characteristic to read from.
-----------------------	----------------------------------

**3.39.2.10** void de.uulm.levazu.library.RBLService.setCharacteristicNotification ( BluetoothGattCharacteristic *characteristic*, boolean *enabled* )

Enables or disables notification on a give characteristic.

## Parameters

<i>characteristic</i>	Characteristic to act on.
<i>enabled</i>	If true, enable notification. False otherwise.

**3.39.2.11** void de.uulm.levazu.library.RBLService.writeCharacteristic ( BluetoothGattCharacteristic *characteristic* )

## Parameters

<i>characteristic</i>	
-----------------------	--

### 3.39.3 Member Data Documentation

**3.39.3.1** final UUID de.uulm.levazu.library.RBLService.UUID\_BLE\_SHIELD\_RX [static]

## Initial value:

```
= UUID
    .fromString(RBLGattAttributes.BLE_SHIELD_RX)
```

**3.39.3.2** final UUID de.uulm.levazu.library.RBLService.UUID\_BLE\_SHIELD\_SERVICE [static]

## Initial value:

```
= UUID
    .fromString(RBLGattAttributes.BLE_SHIELD_SERVICE)
```

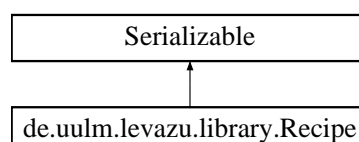
**3.39.3.3** final UUID de.uulm.levazu.library.RBLService.UUID\_BLE\_SHIELD\_TX [static]

## Initial value:

```
= UUID
    .fromString(RBLGattAttributes.BLE_SHIELD_TX)
```

## 3.40 de.uulm.levazu.library.Recipe Class Reference

Inheritance diagram for de.uulm.levazu.library.Recipe:



## Public Member Functions

- **Recipe** (String pName, String[] pWhatToBuy, String pRecipeld, String pRating, String pScore)
- String **getName** ()
- String[] **getWhatToBuy** ()
- String **getRecipeld** ()
- int **getRating** ()
- int **getScore** ()
- String **getSmallImageUrl** ()
- void **setSmallImageURL** (String pUrl)

## Private Attributes

- String **mRecipeld**
- String **mName**
- String **mRating**
- String **mScore**
- String[] **mWhatToBuy**
- String **mSmallImageURL**
- int **mIngredientsThatMatched**

## Static Private Attributes

- static final long **serialVersionUID** = 1L

### 3.40.1 Detailed Description

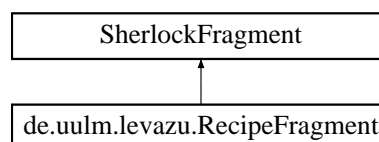
Represents a recipe.

Author

vlad

## 3.41 de.uulm.levazu.RecipeFragment Class Reference

Inheritance diagram for de.uulm.levazu.RecipeFragment:



## Classes

- class [DownloadImageTask](#)
- class [FetchRecipeDetails](#)
- interface [RecipeFragmentListener](#)

## Public Member Functions

- **RecipeFragment** (int pColour, float pWeight, int pMargin\_left, int pMargin\_right, int pMargin\_top, int pMargin\_bottom)
- void **onCreate** (Bundle pSavedInstanceState)
- View **onCreateView** (LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState)
- void **onStart** ()
- void **onResume** ()
- void **onPause** ()
- void **onAttach** (Activity pActivity)
- void **onSaveInstanceState** (Bundle outState)
- [Recipe](#) **getRecipeWithHigehestScore** (Object[] pRecipes)
- [Recipe\[\]](#) **getRecipes** ()

## Protected Member Functions

- boolean [displayRecipes](#) (Bundle pBundle)

## Package Attributes

- int **marginRight**
- int **marginTop**
- int **marginBottom**

## Private Member Functions

- void [showRecipe](#) ([Recipe](#) pRecipe)
- void [showNextRecipe](#) ()

## Private Attributes

- LinearLayout [mLinearLayout](#)
- int **mColour**
- float **mWeight**
- int **marginLeft**
- Object[] **mRecipes** = {}
- [Recipe](#) **mCurrRecipe**
- int **mCurrRecipeIndex** = 0
- TextView **mDebugView**
- [RecipeFragmentListener](#) **mListener**
- BroadcastReceiver **mReceiver**

### 3.41.1 Detailed Description

Fragment Class for managing the recipes.

#### Author

vlad



### 3.41.2 Member Function Documentation

#### 3.41.2.1 boolean de.uulm.levazu.RecipeFragment.displayRecipes ( Bundle *pBundle* ) [protected]

Displays the recipes within the Bundle. For debug purpose..

## Parameters

<i>pBundle</i>	
----------------	--

3.41.2.2 **Recipe** [] de.uulm.levazu.RecipeFragment.getRecipes ( )

Returns the recipes which were hopefully received from the yummlly API.

## Returns

null, if mRecipes is empty

3.41.2.3 **Recipe** de.uulm.levazu.RecipeFragment.getRecipeWithHigehestScore ( Object[] *pRecipes* )

XXX Returns the recipe with the highest score within the given recipes. On details how the score is computed (MAUT), look here: ...

## Parameters

<i>pRecipes</i>	
-----------------	--

## 3.41.2.4 void de.uulm.levazu.RecipeFragment.showNextRecipe ( ) [private]

Shows the next recipe.

3.41.2.5 void de.uulm.levazu.RecipeFragment.showRecipe ( **Recipe** *pRecipe* ) [private]

Shows the recipe on the recipe fragment.

## Parameters

<i>pRecipe</i>	
----------------	--

## 3.41.3 Member Data Documentation

3.41.3.1 **LinearLayout** de.uulm.levazu.RecipeFragment.mLinearLayout [private]

root layout of the fragment

3.41.3.2 **BroadcastReceiver** de.uulm.levazu.RecipeFragment.mReceiver [private]

## Initial value:

```
= new BroadcastReceiver() {
    @Override
    public void onReceive(Context pContext, Intent pIntent)
    {
        Bundle bundle = pIntent.getExtras();
        if (bundle != null)
        {
            int resultCode = bundle.getInt(YummllyAPI.RESULT);
            if (resultCode == Activity.RESULT_OK)
            {
                mRecipes = (Object[]) bundle.getSerializable(YummllyAPI.RECIPES);
                if (mRecipes.length > 0)
                {
                    mListener.onRecipesUpdated(mRecipes[0]);
                }
            }
        }
    }
}
```

```

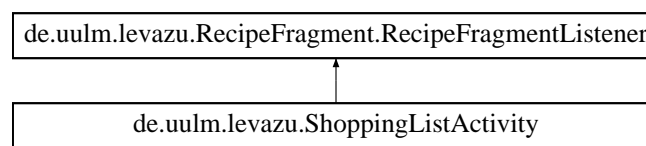
        mCurrRecipe = getRecipeWithHigehestScore(mRecipes);
        showRecipe((Recipe) mRecipes[mCurrRecipeIndex]);

        Toast.makeText(getSherlockActivity(), "Request to YummlyAPI complete.",
            Toast.LENGTH_SHORT).show();
    }
    else
        Toast.makeText(getSherlockActivity(), "No Recipes found", Toast.LENGTH_SHORT).show();
    }
    else
        Toast.makeText(getSherlockActivity(), "Request to YummlyAPI failed!", Toast.LENGTH_SHORT).
            show();
    }
}
}

```

## 3.42 de.uulm.levazu.RecipeFragment.RecipeFragmentListener Interface Reference

Inheritance diagram for de.uulm.levazu.RecipeFragment.RecipeFragmentListener:



### Public Member Functions

- void [onRecipesUpdated](#) (Object pRecipe)

#### 3.42.1 Member Function Documentation

##### 3.42.1.1 void de.uulm.levazu.RecipeFragment.RecipeFragmentListener.onRecipesUpdated ( Object *pRecipe* )

Will be called, when the recipes are updated. This means when a new recipe response from the YummlyAPI is received. Or when the next recipe is selected.

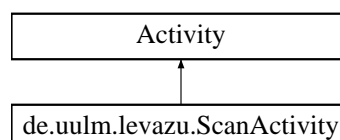
Parameters

<i>pRecipes</i>	
-----------------	--

Implemented in [de.uulm.levazu.ShoppingListActivity](#).

## 3.43 de.uulm.levazu.ScanActivity Class Reference

Inheritance diagram for de.uulm.levazu.ScanActivity:



### Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)
- boolean **onOptionsItemSelected** (MenuItem item)

### Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

### Private Member Functions

- void [setupActionBar](#) ()

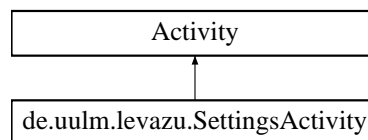
### 3.43.1 Member Function Documentation

#### 3.43.1.1 void `de.uulm.levazu.ScanActivity.setupActionBar` ( ) [private]

Set up the [android.app.ActionBar](#), if the API is available.

## 3.44 `de.uulm.levazu.SettingsActivity` Class Reference

Inheritance diagram for `de.uulm.levazu.SettingsActivity`:



### Public Member Functions

- boolean **onCreateOptionsMenu** (Menu menu)
- boolean **onOptionsItemSelected** (MenuItem item)
- boolean [onKeyDown](#) (int keyCode, KeyEvent event)

### Protected Member Functions

- void **onCreate** (Bundle savedInstanceState)

### Package Attributes

- [ExpandableListAdapter](#) **listAdapter**
- ExpandableListView **expListView**
- List< String > **listDataHeader**
- HashMap< String, List< String > > **listDataChild**
- [PreferencesDialogManager](#) **dialogManager**
- [UserPreferences](#) **userPreferences**

### Private Member Functions

- void [prepareListData](#) ()
- void [setupActionBar](#) ()

### 3.44.1 Detailed Description

Activity for setting management

Author

Andreas Blezu

### 3.44.2 Member Function Documentation

#### 3.44.2.1 `boolean de.uulm.levazu.SettingsActivity.onKeyDown ( int keyCode, KeyEvent event )`

EventHandler for pressing the menu button "save". Opens an AlertDialog in which one can choose to save all changed UserPreferences or to reset them.

#### 3.44.2.2 `void de.uulm.levazu.SettingsActivity.prepareListData ( ) [private]`

Adds all categories and subcategories to listDataHeader and listDataChild

#### 3.44.2.3 `void de.uulm.levazu.SettingsActivity.setupActionBar ( ) [private]`

Set up the [android.app.ActionBar](#), if the API is available.

## 3.45 de.uulm.levazu.library.Shop Class Reference

### Public Member Functions

- [Shop](#) ()
- [Shop](#) (String name, Double lat, Double lng, String products[])
- String [getName](#) ()
- Double [getLat](#) ()
- Double [getLng](#) ()
- String[][] [getProducts](#) ()
- Boolean [hasProducts](#) ()

### Private Attributes

- String **name**
- Double **lat**
- Double **lng**
- String **products** []

### 3.45.1 Detailed Description

Representation of a shop

Author

Michael Legner

### 3.45.2 Constructor & Destructor Documentation

#### 3.45.2.1 `de.uulm.levazu.library.Shop.Shop ( )`

empty constructor

#### 3.45.2.2 `de.uulm.levazu.library.Shop.Shop ( String name, Double lat, Double lng, String products[[[ ] ] )`

Constructor

Parameters

<i>name</i>	Name of Shop
<i>lat</i>	latitude
<i>lng</i>	longitude
<i>products</i>	Array of Strings with names of products in shops

### 3.45.3 Member Function Documentation

#### 3.45.3.1 `Double de.uulm.levazu.library.Shop.getLat ( )`

Getter for latitude attribute

Returns

latitude

#### 3.45.3.2 `Double de.uulm.levazu.library.Shop.getLng ( )`

Getter for longitude attribute

Returns

longitude

#### 3.45.3.3 `String de.uulm.levazu.library.Shop.getName ( )`

Getter for name attribute

Returns

name

#### 3.45.3.4 `String [[[ ] ] de.uulm.levazu.library.Shop.getProducts ( )`

Getter for products

Returns

Array of Strings with product names

### 3.45.3.5 Boolean de.uulm.levazu.library.Shop.hasProducts ( )

Checks if shop has products

## Returns

true if shop has products, false if not

### 3.46 de.uulm.levazu.ShoppingListActivity Class Reference

Inheritance diagram for de.uulm.levazu.ShoppingListActivity:



## Classes

- enum PERSPECTIVE

## Public Member Functions

- boolean **onCreateOptionsMenu** (Menu pMenu)
- boolean **onOptionsItemSelected** (MenuItem pItem)
- boolean **onTouch** (View v, MotionEvent pEvent)
- void **onConfigurationChanged** (Configuration pNewConfig)
- void **onTabSelected** (Tab tab, FragmentTransaction ft)
- void **onTabUnselected** (Tab tab, FragmentTransaction ft)
- void **onTabReselected** (Tab tab, FragmentTransaction ft)
- void **onProductSelected** (int pIndex)
- void **onProductLongPressed** (int pIndex)
- void **onFridgeItemSelected** (int pIndex)
- void **onBackPressed** ()
- void **addNewProduct** (View pView)
- void **onRecipesUpdated** (Object pRecipe)
- Object[] **getFridgeItems** ()

## Static Public Member Functions

- static boolean **isActivityVisible** ()
- static void **activityResumed** ()
- static void **activityPaused** ()

## Static Public Attributes

- static int **shop\_id** = 5

### Protected Member Functions

- void **onCreate** (Bundle pSavedInstanceState)
- void **onDestroy** ()
- void **onActivityResult** (int requestCode, int resultCode, Intent data)
- void [sendIntentTo](#) (Class<?> pService)
- void **onRestoreInstanceState** (Bundle savedInstanceState)
- void **onPause** ()
- void **onStop** ()
- void **onSaveInstanceState** (Bundle outState)
- void **onResume** ()
- void [showLoadingGif](#) (boolean plsVisible)

### Package Attributes

- ToggleButton **connectBtn**
- Button **scanRest**
- boolean **budgetExceeded** = false
- int **currentExpenses** =0
- int **maxBudget** =0
- double **exceededValue**

### Private Member Functions

- void [displayData](#) (String data)
- void [readRFID](#) (byte[] data)
- void [startReadRssi](#) ()
- void [getGattService](#) (BluetoothGattService gattService)
- void [scanLeDevice](#) ()
- void [showTabsNav](#) ()
- boolean [createLandscapeUI](#) ()
- boolean [showShoppingList](#) ()
- void [showFridgeList](#) ()
- void [markProductWithTag](#) (String pTag)
- void [highlightProduct](#) (int plIndex, boolean plsInBasket, int amount)
- void **connectBLE** ()
- void **disconnectBLE** ()
- void [scanRest](#) ()
- void [initiateCheckout](#) ()
- void [checkOutConfirm](#) ()
- void [saveNewBudget](#) ()
- void [budgetWarningNotification](#) ()
- boolean [isBudgetExceeded](#) (String pMessage)

### Static Private Member Functions

- static IntentFilter [makeGattUpdateIntentFilter](#) ()



## Private Attributes

- [RecipeFragment](#) **recipeFrag**
- [FridgeListFragment](#) **fridgeListFrag**
- [ImageView](#) **mGif**
- [String\[\]](#) **mOldShoppinglistItems** = {}
- [String\[\]](#) **mOldFridgeItems** = {}
- [boolean](#) **useLogo** = false
- [boolean](#) **showHomeUp** = true
- [boolean](#) **landscape\_before** = false
- [boolean](#) **stopped** = false
- [PERSPECTIVE](#) **mPerspective** = PERSPECTIVE.SHOPPINGLIST
- [BluetoothGattCharacteristic](#) **characteristicTx** = null
- [RBLService](#) **mBluetoothLeService**
- [BluetoothAdapter](#) **mBluetoothAdapter**
- [BluetoothDevice](#) **mDevice** = null
- [String](#) **mDeviceAddress**
- [boolean](#) **ble\_flag** = true
- [boolean](#) **connState** = false
- [boolean](#) **scanFlag** = false
- [byte\[\]](#) **data** = new byte[30]
- [boolean](#) **ble\_supported** = false
- [Object](#) **mLeScanCallback** = null
- [Budget](#) **budget**
- [Double](#) **price** = 0.0
- [final ServiceConnection](#) **mServiceConnection**
- [final BroadcastReceiver](#) **mGattUpdateReceiver**

## Static Private Attributes

- [static ShoppingListFragment](#) **shoppingListFrag**
- [static boolean](#) **activityVisible**
- [static final int](#) **REQUEST\_ENABLE\_BT** = 1
- [static final long](#) **SCAN\_PERIOD** = 2000

### 3.46.1 Detailed Description

Class which manages the three fragments ShoppingListFragemnt, RecipeFragment and FridgeListFragment.

Author

vlad

### 3.46.2 Member Function Documentation

3.46.2.1 `void de.uulm.levazu.ShoppingListActivity.addNewProduct ( View pView )`

[ShoppingListFragment#searchNewProduct\(View\)](#)

3.46.2.2 `void de.uulm.levazu.ShoppingListActivity.budgetWarningNotification ( ) \[private\]`

Creates a notification and notifies the user of an exceeded budget.

### 3.46.2.3 void de.uulm.levazu.ShoppingListActivity.checkOutConfirm ( ) [private]

If an user confirms a checkout dialog, the system sends data of the bought products to the server in order to create a new payment and update the shoppinglist of the user.

### 3.46.2.4 boolean de.uulm.levazu.ShoppingListActivity.createLandscapeUI ( ) [private]

Arranges our ShoppingListFragment and RecipeFragment in a different way, when the device is in landscape mode.

Returns

### 3.46.2.5 void de.uulm.levazu.ShoppingListActivity.displayData ( String *data* ) [private]

display RSSI value

Parameters

<i>data</i>	rsi as string
-------------	---------------

### 3.46.2.6 Object [] de.uulm.levazu.ShoppingListActivity.getFridgeItems ( )

Returns the Items in the Fridge.

Returns

### 3.46.2.7 void de.uulm.levazu.ShoppingListActivity.getGattService ( BluetoothGattService *gattService* ) [private]

Connect to BLE service

Parameters

<i>gattService</i>	
--------------------	--

### 3.46.2.8 void de.uulm.levazu.ShoppingListActivity.highlightProduct ( int *plIndex*, boolean *plsInBasket*, int *amount* ) [private]

Highlights the product at the given position on our shoppinglist (ListView).

Parameters

<i>plIndex</i>	
<i>plsInBasket</i>	

### 3.46.2.9 void de.uulm.levazu.ShoppingListActivity.initiateCheckout ( ) [private]

If a user is in the checkout area, an AlertDialog indicates the possibility to buy all the scanned products. The user will be told, if he forgot any product in the current shop. Also the price and an sign for exceeding the budget will be shown.

3.46.2.10 `boolean de.uulm.levazu.ShoppingListActivity.isBudgetExceeded ( String pMessage ) [private]`

Checks if a recently added product exceeds the budget for its category

3.46.2.11 `static IntentFilter de.uulm.levazu.ShoppingListActivity.makeGattUpdateIntentFilter ( ) [static], [private]`

Intent filter for actions from RBLService

Returns

intent filter

3.46.2.12 `void de.uulm.levazu.ShoppingListActivity.markProductWithTag ( String pTag ) [private]`

Marks a product in the shoppinglist with the given tag. The tag is received via bluetooth.

Parameters

<i>pTag</i>	
-------------	--

3.46.2.13 `void de.uulm.levazu.ShoppingListActivity.onRecipesUpdated ( Object pRecipe )`

Will be called, when the recipes are updated. This means when a new recipe response from the YummlyAPI is received. Or when the next recipe is selected.

Parameters

<i>pRecipes</i>	
-----------------	--

Implements [de.uulm.levazu.RecipeFragment.RecipeFragmentListener](#).

3.46.2.14 `void de.uulm.levazu.ShoppingListActivity.readRFID ( byte[] data ) [private]`

reads id of RFID tag

Parameters

<i>data</i>	
-------------	--

3.46.2.15 `void de.uulm.levazu.ShoppingListActivity.saveNewBudget ( ) [private]`

If an user exceeds the budget, he can save the latest expenses as the new budget.

3.46.2.16 `void de.uulm.levazu.ShoppingListActivity.scanLeDevice ( ) [private]`

scan for BLE devices

3.46.2.17 `void de.uulm.levazu.ShoppingListActivity.scanRest ( ) [private]`

dummy for presentation

3.46.2.18 void de.uulm.levazu.ShoppingListActivity.sendIntentTo ( Class<?> *pService* ) [protected]

Starts the given service and sends an Intent to it.

## Parameters

<i>pService</i>	
-----------------	--

**3.46.2.19** void de.uulm.levazu.ShoppingListActivity.showFridgeList ( ) [private]

Shows our FridgelistFragment. Other Fragments will be hidden.

## Returns

**3.46.2.20** void de.uulm.levazu.ShoppingListActivity.showLoadingGif ( boolean *plsVisible* ) [protected]

Shows or hides a GIF on the ShoppingListActivity main layout.

## Parameters

<i>plsVisible</i>	
-------------------	--

**3.46.2.21** boolean de.uulm.levazu.ShoppingListActivity.showShoppingList ( ) [private]

Shows our ShoppingListFragment. Other Fragments will be hidden.

## Returns

**3.46.2.22** void de.uulm.levazu.ShoppingListActivity.showTabsNav ( ) [private]

Displays our Tab navigation on top of the app.

**3.46.2.23** void de.uulm.levazu.ShoppingListActivity.startReadRssi ( ) [private]

starts to periodically read RSSI value

### 3.46.3 Member Data Documentation

**3.46.3.1** boolean de.uulm.levazu.ShoppingListActivity.landscape\_before = false [private]

Is needed to stay in landscape mode, when the app resumes from standby.

**3.46.3.2** final BroadcastReceiver de.uulm.levazu.ShoppingListActivity.mGattUpdateReceiver [private]

**Initial value:**

```
= new BroadcastReceiver() {
    @Override
    public void onReceive(Context context, Intent intent) {
        final String action = intent.getAction();

        if (RBLService.ACTION_GATT_DISCONNECTED.equals(action)) {

        } else if (RBLService.ACTION_GATT_SERVICES_DISCOVERED.equals(action)) {
            Toast.makeText(getApplicationContext(), "Connected", Toast.LENGTH_SHORT).show();
        }
    }
}
```

```

        getGattService(mBluetoothLeService.
getSupportedGattService());
    } else if (RBLService.ACTION_DATA_AVAILABLE.equals(action)) {
        data = intent.getByteArrayExtra(RBLService.EXTRA_DATA);
        readRFID(data);
    } else if (RBLService.ACTION_GATT_RSSI.equals(action)) {
    }
}
}
}

```

receives messages from BLE Shield

### 3.46.3.3 PERSPECTIVE de.uulm.levazu.ShoppingListActivity.mPerspective = PERSPECTIVE.SHOPPINGLIST [private]

The current perspective.

### 3.46.3.4 final ServiceConnection de.uulm.levazu.ShoppingListActivity.mServiceConnection [private]

Initial value:

```

= new ServiceConnection() {
    @Override
    public void onServiceConnected(ComponentName componentName, IBinder service) {
        mBluetoothLeService = ((RBLService.LocalBinder) service).getService();
        if (!mBluetoothLeService.initialize()) {
            Log.e(ShoppingListActivity.class.getSimpleName(), "Unable to initialize Bluetooth");
            finish();
        }
    }

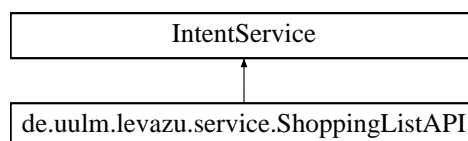
    @Override
    public void onServiceDisconnected(ComponentName componentName) {
        mBluetoothLeService = null;
    }
}

```

establishes connection to BLE service

## 3.47 de.uulm.levazu.service.ShoppingListAPI Class Reference

Inheritance diagram for de.uulm.levazu.service.ShoppingListAPI:



### Static Public Attributes

- static final String **SHOPPINGLIST** = "shoppinglist"
- static final String **RESULT** = "result"
- static final String **NOTIFICATION** = "de.uulm.levazu.service.ShoppingListAPI"
- static final String **ERRORMSG** = "error\_message"

### Protected Member Functions

- void **onHandleIntent** (Intent plntent)

### Private Member Functions

- void **publishResults** (int pResult, [Product](#)[] pProducts, String pErrorMsg)

### Private Attributes

- int **mResult** = Activity.RESULT\_CANCELED
- String **mErrorMsg** = ""
- [Product](#)[] **mProducts** = {}

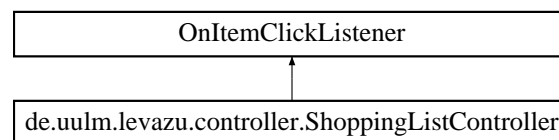
#### 3.47.1 Detailed Description

Author

vlad

## 3.48 de.uulm.levazu.controller.ShoppingListController Class Reference

Inheritance diagram for de.uulm.levazu.controller.ShoppingListController:



### Public Member Functions

- void **onItemClick** (AdapterView<?> pParent, View pView, int pPos, long pld)

#### 3.48.1 Detailed Description

Author

vlad

## 3.49 de.uulm.levazu.ShoppingListFragment Class Reference

Inheritance diagram for de.uulm.levazu.ShoppingListFragment:



### Classes

- interface [OnProductSelectedListener](#)

## Public Member Functions

- **ShoppingListFragment** (int pColour, float pWeight, int pMargin\_left, int pMargin\_right, int pMargin\_top, int pMargin\_bottom)
- ListView **getmShoppinglist** ()
- void **onCreate** (Bundle pSavedInstanceState)
- View **onCreateView** (LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState)
- void **onAttach** (Activity pActivity)
- void **onStart** ()
- void **onPause** ()
- void **onResume** ()
- void **onSaveInstanceState** (Bundle pState)
- void **onItemClick** (AdapterView<?> pParent, View pView, int pPos, long pId)
- boolean **onItemLongClick** (AdapterView<?> pParent, View pView, int pPos, long pId)
- Object[] **getShoppingListProducts** ()
- boolean **isShoppingListEmpty** ()
- synchronized void **removeFromMPProducts** (Product pProduct)

## Public Attributes

- BroadcastReceiver **mReceiver**

## Protected Member Functions

- void **searchNewProduct** (View pView)
- void **addNewProduct** (final Product[] pProducts)
- void **addWhatToBuy** (Object pRecipe)
- String[] **getShoppingListItemNames** (boolean plsIngredient)
- void **insertIntoMPProducts** (Product pProduct)

## Package Attributes

- int **marginRight**
- int **marginTop**
- int **marginBottom**

## Private Member Functions

- void **populateListView** (ArrayList< Product > pProducts)
- boolean **displayProducts** ()

## Private Attributes

- LinearLayout **mLinearLayout**
- int **mColour**
- float **mWeight**
- int **marginLeft**
- ListView **mShoppinglist**
- Object[] **mProducts** = {}
- ArrayList< Product > **mProductsAddedForRecipe** = new ArrayList<Product>()
- OnProductSelectedListener **mListener**



### 3.49.1 Detailed Description

Author

vlad

### 3.49.2 Member Function Documentation

3.49.2.1 void de.uulm.levazu.ShoppingListFragment.addNewProduct ( final Product[] *pProducts* ) [protected]

Dialog for "search new Product"

Parameters

<i>pProducts</i>	
------------------	--

3.49.2.2 void de.uulm.levazu.ShoppingListFragment.addWhatToBuy ( Object *pRecipe* ) [protected]

XXX TODO Adds the ingredients of the given recipes to the shoppinglist.

Parameters

<i>pRecipe</i>	
----------------	--

3.49.2.3 boolean de.uulm.levazu.ShoppingListFragment.displayProducts ( ) [private]

Makes several steps in order to show our products: Puts mProducts into an ArrayList and passes it to our shoppinglist ListView. And adds listeners for interactions on our ListView.

3.49.2.4 String [] de.uulm.levazu.ShoppingListFragment.getShoppingListItemNames ( boolean *plsIngredient* ) [protected]

Returns the names of the products on the shoppinglist. You can choose if the returned products should be (eatable) ingredients or not.

Parameters

<i>plsIngredient</i>	(true or false)
----------------------	-----------------

Returns

Names as String array.

3.49.2.5 Object [] de.uulm.levazu.ShoppingListFragment.getShoppingListProducts ( )

Returns the products of the shoppinglist.

Returns

Objects

3.49.2.6 void de.uulm.levazu.ShoppingListFragment.insertIntoMProducts ( Product *pProduct* ) [protected]

Insert products into ListView shoppinglist and into mProducts Array.

## Parameters

<i>pProduct</i>	
-----------------	--

## 3.49.2.7 boolean de.uulm.levazu.ShoppingListFragment.isShoppingListEmpty ( )

Returns the products of the shoppinglist.

## Returns

Objects

3.49.2.8 void de.uulm.levazu.ShoppingListFragment.populateListView ( ArrayList< Product > *pProducts* ) [private]

Put the given products into our shoppinglist ListView.

## Parameters

<i>pProducts</i>	
------------------	--

3.49.2.9 synchronized void de.uulm.levazu.ShoppingListFragment.removeFromMProducts ( Product *pProduct* )

Removes a product from our ListView shoppinglist and from our mProducts Array.

## Parameters

<i>pProduct</i>	
-----------------	--

3.49.2.10 void de.uulm.levazu.ShoppingListFragment.searchNewProduct ( View *pView* ) [protected]

Adds a new product to the shoppinglist.

## 3.49.3 Member Data Documentation

## 3.49.3.1 LinearLayout de.uulm.levazu.ShoppingListFragment.mLinearLayout [private]

root layout of the fragment

## 3.50 de.uulm.levazu.library.ShoppingListFunctions Class Reference

## Public Member Functions

- [Product\[\]](#) [getUnknownProduct](#) (String pUnknownItem, String pAction)
- void [addProductToShoppinglist](#) ([Product](#) pProduct)
- void [getPriceOfProduct](#) ([Product](#) pProduct, int pShop)
- boolean [isProductInShop](#) ([Product](#) pProduct, int pShop)
- boolean [isCheapestInShop](#) ([Product](#) pProduct, int pShop)

## Static Public Member Functions

- static [Product\[\]](#) [createProductFromJSON](#) (JSONObject pJson, String pSource)

## Protected Member Functions

- JSONObject [getShoppingListByld](#) (int pld)
- JSONObject [getShoppingListByUser](#) (int pUserId)
- JSONObject [getShoppingListByUser](#) (int pUserId, boolean pTags)
- JSONObject [getItemsInFridge](#) ()
- boolean [deleteProductFromProductsTable](#) ([Product](#) pProduct)

## Private Attributes

- [JSONParser](#) **jsonParser**
- [UserFunctions](#) **userFunctions**

## Static Private Attributes

- static String [API\\_URL](#) = "http://mobile1.informatik.uni-ulm.de/websrv/"

### 3.50.1 Detailed Description

Provides functions to receive the shopping- and fridge-lists from the websrv

Author

vlad

### 3.50.2 Member Function Documentation

#### 3.50.2.1 void de.uulm.levazu.library.ShoppingListFunctions.addProductToShoppinglist ( [Product](#) *pProduct* )

Adds the given product to the shoppinglist of the current user

Parameters

<i>pProduct</i>	
-----------------	--

#### 3.50.2.2 static [Product](#) [] de.uulm.levazu.library.ShoppingListFunctions.createProductFromJSON ( [JSONObject](#) *pJson*, [String](#) *pSource* ) [static]

Creates products out of the JSONObject from the request to our "shoppinglist\_api" (on our websrv) or from the request to map\_tags.php (the source of the JSONObject has to be specified)

Parameters

<i>pJson</i>	
<i>pSource</i>	can be "shoppinglist" or "item" (from map_tags)

Returns

**3.50.2.3** `boolean de.uulm.levazu.library.ShoppingListFunctions.deleteProductFromProductsTable ( Product pProduct )`  
[protected]

Deletes the given product from our products table in our DB.

Returns

**3.50.2.4** `JSONObject de.uulm.levazu.library.ShoppingListFunctions.getItemsInFridge ( )` [protected]

Returns the items which are located in the fridge.

Returns

JSONObject

**3.50.2.5** `void de.uulm.levazu.library.ShoppingListFunctions.getPriceOfProduct ( Product pProduct, int pShop )`

Gets the price of the given product in a specific shop

Parameters

<i>pProduct</i>	
<i>pShop</i>	

**3.50.2.6** `JSONObject de.uulm.levazu.library.ShoppingListFunctions.getShoppingListById ( int pId )` [protected]

Returns the shopping list with the given id as JSONObject.

Parameters

<i>pId</i>	
------------	--

Returns

JSONObject

**3.50.2.7** `JSONObject de.uulm.levazu.library.ShoppingListFunctions.getShoppingListByUser ( int pUserId )` [protected]

Returns the shopping list for the given user id as JSONObject.

Parameters

<i>pUserId</i>	
----------------	--

Returns

**3.50.2.8** `JSONObject de.uulm.levazu.library.ShoppingListFunctions.getShoppingListByUser ( int pUserId, boolean pTags )`  
[protected]

Returns the shopping list for the given user id with/without tags of the products as JSONObject.

## Parameters

<i>pUserId</i>	
<i>ptags</i>	

## Returns

### 3.50.2.9 Product [] de.uulm.levazu.library.ShoppingListFunctions.getUnknownProduct ( String *pUnknownItem*, String *pAction* )

If the RFID-Tag, which was read, is unknown, you can use this method to start a request to our map\_tags.php, in order to find a product with the given tag in our DB. Or you can search for a product name (String).

## Parameters

<i>pUnknownItem</i>	can be the name of a product or the value of a RFID-tag
<i>pAction</i>	can be "manual" (for Strings) or "automatic" (for read tags)

## Returns

### 3.50.2.10 boolean de.uulm.levazu.library.ShoppingListFunctions.isCheapestInShop ( Product *pProduct*, int *pShop* )

Is pShop the cheapest of all shops for the given product?

## Parameters

<i>pProduct</i>	
<i>pShop</i>	

## Returns

### 3.50.2.11 boolean de.uulm.levazu.library.ShoppingListFunctions.isProductInShop ( Product *pProduct*, int *pShop* )

Is the given product in the specific shop?

## Parameters

<i>pProduct</i>	
<i>pShop</i>	

## Returns

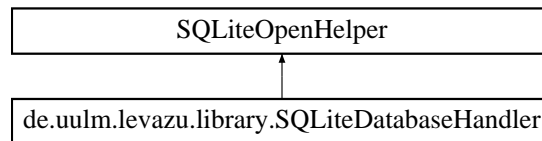
## 3.50.3 Member Data Documentation

### 3.50.3.1 String de.uulm.levazu.library.ShoppingListFunctions.API\_URL = "http://mobile1.informatik.uni-ulm.de/websrv/" [static], [private]

URL to the Web-API

### 3.51 de.uulm.levazu.library.SQLiteDatabaseHandler Class Reference

Inheritance diagram for de.uulm.levazu.library.SQLiteDatabaseHandler:



#### Public Member Functions

- **SQLiteDatabaseHandler** (Context context)
- void **onCreate** (SQLiteDatabase db)
- void **onUpgrade** (SQLiteDatabase db, int oldVersion, int newVersion)
- void **addUser** (String name, String email, String uid, String created\_at, String lng, String demoStep)
- HashMap< String, String > **getUserDetails** ()
- int **getRowCount** ()
- void **resetTables** ()
- boolean **setDemoStep** (String demoStep, String uid)

#### Static Private Attributes

- static final int **DATABASE\_VERSION** = 8
- static final String **DATABASE\_NAME** = "android\_api"
- static final String **TABLE\_LOGIN** = "login"
- static final String **KEY\_ID** = "id"
- static final String **KEY\_NAME** = "name"
- static final String **KEY\_EMAIL** = "email"
- static final String **KEY\_UID** = "uid"
- static final String **KEY\_CREATED\_AT** = "created\_at"
- static String **KEY\_LAT** = "lat"
- static String **KEY\_LNG** = "lng"
- static String **KEY\_DEMOSTEP** = "demoStep"

#### 3.51.1 Member Function Documentation

3.51.1.1 void de.uulm.levazu.library.SQLiteDatabaseHandler.addUser ( String *name*, String *email*, String *uid*, String *created\_at*, String *lat*, String *lng*, String *demoStep* )

Storing user details in database

3.51.1.2 int de.uulm.levazu.library.SQLiteDatabaseHandler.getRowCount ( )

Getting user login status return true if rows are there in table

3.51.1.3 HashMap<String, String> de.uulm.levazu.library.SQLiteDatabaseHandler.getUserDetails ( )

Getting user data from database

## 3.51.1.4 void de.uulm.levazu.library.SQLiteDatabaseHandler.resetTables ( )

Re crate database Delete all tables and create them again

3.51.1.5 boolean de.uulm.levazu.library.SQLiteDatabaseHandler.setDemoStep ( String *demoStep*, String *uid* )

Update demoStep variable

Parameters

<i>demoStep</i>	new value of demoStep
<i>uid</i>	User ID

Returns

true if updated, false if an error occured or nothing was updated

## 3.52 de.uulm.levazu.library.UserFunctions Class Reference

### Protected Member Functions

- JSONObject [loginUser](#) (String email, String password)
- JSONObject [registerUser](#) (String name, String email, String password)
- boolean [isUserLoggedIn](#) (Context context)
- boolean [logoutUser](#) (Context context)
- [JSONParser](#) [getJSONParser](#) ()

### Private Attributes

- [JSONParser](#) [jsonParser](#)

### Static Private Attributes

- static String **REGISTER\_URL** = "http://mobile1.informatik.uni-ulm.de/websrv/"
- static String **LOGIN\_TAG** = "login"
- static String **REGISTER\_TAG** = "register"

### 3.52.1 Detailed Description

This class has functions to handle all user events like loginUser() registerUser() getLoginStatus() logoutUser().

Author

vlad

### 3.52.2 Member Function Documentation

3.52.2.1 boolean de.uulm.levazu.library.UserFunctions.isUserLoggedIn ( Context *context* ) [protected]

Function get Login status

3.52.2.2 JSONObject de.uulm.levazu.library.UserFunctions.loginUser ( String *email*, String *password* ) [protected]

function does Login Request

## Parameters

<i>email</i>	
<i>password</i>	

3.52.2.3 **boolean** `de.uulm.levazu.library.UserFunctions.logoutUser ( Context context )` `[protected]`

Resets the SQLite table for the users. So there is no user available afterwards.

3.52.2.4 **JSONObject** `de.uulm.levazu.library.UserFunctions.registerUser ( String name, String email, String password )`  
`[protected]`

function make Login Request

## Parameters

<i>name</i>	
<i>email</i>	
<i>password</i>	

### 3.53 de.uulm.levazu.library.UserPreferences Class Reference

#### Public Member Functions

- **UserPreferences** (Context *context*)
- String [getPreferencesByCategory](#) (String *Category*)
- void [setPreferenceByCategorie](#) (String *category*, String *value*)
- void [resetPreferences](#) ()
- void [savePreferencesInDB](#) ()

#### Static Public Member Functions

- static String [getId](#) ()

#### Static Public Attributes

- static String **PREFERENCES\_TAG** = "preferences"
- static String **SAVE\_ACTION** = "saveSettings"
- static JSONArray **preferences**
- static JSONArray **oldPreferences**

#### Package Attributes

- [WebAPI](#) **webAPI**
- [JSONParser](#) **jsonParser**

#### Private Attributes

- Context **context**
- JSONObject **jsonObject**



## Static Private Attributes

- static String **id**

### 3.53.1 Detailed Description

Author

Andy

### 3.53.2 Member Function Documentation

#### 3.53.2.1 String de.uulm.levazu.library.UserPreferences.getPreferencesByCategory ( String *Category* )

Gets the value of a preference given by category

Parameters

<i>Category</i>	
-----------------	--

Returns

#### 3.53.2.2 void de.uulm.levazu.library.UserPreferences.resetPreferences ( )

Resets preferences

#### 3.53.2.3 void de.uulm.levazu.library.UserPreferences.savePreferencesInDB ( )

Saves new preferences on the Database

#### 3.53.2.4 void de.uulm.levazu.library.UserPreferences.setPreferenceByCategorie ( String *category*, String *value* )

Sets a preference given by category to the given value

Parameters

<i>category</i>	
<i>value</i>	

## 3.54 de.uulm.levazu.library.WebAPI Class Reference

### Public Member Functions

- [WebAPI](#) (Context pContext)
- JSONObject [loginUser](#) (String pEmail, String pPassword)
- boolean [logoutUser](#) ()
- boolean [isUserLoggedIn](#) (Context context)
- JSONObject [getShoppingListById](#) (int pId)
- JSONObject [getShoppingListByUser](#) (int pUserId)
- JSONObject [getShoppingListByUser](#) (int pUserId, boolean pTags)
- JSONObject [getShoppingListForCurrentUser](#) ()

- JSONObject [getItemsInFridge](#) ()
- JSONArray [getPreferencesByUserId](#) (String uid)
- JSONObject [askShoppinglistForUpdates](#) (String uid)
- boolean [deleteProductFromProductsTable](#) ([Product](#) pProduct)
- [JSONParser](#) [getJSONParser](#) ()
- [Product](#)[] [getUnknownProduct](#) (String pUnknownItem, String pAction)
- void [addProductToShoppinglist](#) ([Product](#) pProduct)
- void [getPriceOfProduct](#) ([Product](#) pProduct, int pShop)
- boolean [isProductInShop](#) ([Product](#) pProduct, int pShop)
- boolean [isCheapestInShop](#) ([Product](#) pProduct, int pShop)

### Static Public Attributes

- static String [API\\_URL](#) = "http://mobile1.informatik.uni-ulm.de/websrv/"
- static String [TO\\_BUY](#) = "tobuy"

### Private Attributes

- Context [mAppContext](#)
- [JSONParser](#) [mJsonParser](#)
- [UserFunctions](#) [mUserFunctions](#)
- [ShoppingListFunctions](#) [mShoppingListFunctions](#)

### Static Private Attributes

- static String [TOKEN](#) = ""

## 3.54.1 Detailed Description

### Author

vlad

## 3.54.2 Constructor & Destructor Documentation

### 3.54.2.1 `de.uulm.levazu.library.WebAPI.WebAPI ( Context pContext )`

Class which manages the available requests to the Web-API.

#### Parameters

<i>pContext</i>	
-----------------	--

## 3.54.3 Member Function Documentation

### 3.54.3.1 `void de.uulm.levazu.library.WebAPI.addProductToShoppinglist ( Product pProduct )`

[ShoppingListFunctions#addProductToShoppinglist\(Product\)](#)

## Parameters

<i>pUnknownItem</i>	
<i>pAction</i>	

## Returns

3.54.3.2 JSONObject de.uulm.levazu.library.WebAPI.askShoopinglistForUpdates ( String *uid* )

Trigger for server to update the shoppinglist for a User given by uid

## Parameters

<i>uid</i>	
------------	--

## Returns

3.54.3.3 boolean de.uulm.levazu.library.WebAPI.deleteProductFromProductsTable ( Product *pProduct* )

[ShoppingListFunctions#deleteProductFromProductsTable\(Product\)](#)

## Parameters

<i>pProduct</i>	
-----------------	--

## Returns

## 3.54.3.4 JSONObject de.uulm.levazu.library.WebAPI.getItemsInFridge ( )

[ShoppingListFunctions#getItemsInFridge\(\)](#)

## Returns

3.54.3.5 JSONArray de.uulm.levazu.library.WebAPI.getPreferencesByUserId ( String *uid* )

Gets UserPreferences for a given user (uid) and returns a JSONArray

## Parameters

<i>uid</i>	
------------	--

## Returns

3.54.3.6 void de.uulm.levazu.library.WebAPI.getPriceOfProduct ( Product *pProduct*, int *pShop* )

[ShoppingListFunctions#getPriceOfProduct\(Product, int\)](#)

## Parameters

<i>pUnknownItem</i>	
<i>pAction</i>	

## Returns

3.54.3.7    `JSONObject de.uulm.levazu.library.WebAPI.getShoppingListById ( int pId )`

[ShoppingListFunctions#getShoppingListById\(int\)](#)

## Returns

3.54.3.8    `JSONObject de.uulm.levazu.library.WebAPI.getShoppingListByUser ( int pUserId )`

[ShoppingListFunctions#getShoppingListByUser\(int\)](#)

## Parameters

<i>pUserId</i>	
----------------	--

## Returns

3.54.3.9    `JSONObject de.uulm.levazu.library.WebAPI.getShoppingListByUser ( int pUserId, boolean pTags )`

[ShoppingListFunctions#getShoppingListByUser\(int,boolean\)](#)

## Parameters

<i>pUserId</i>	
<i>pTags</i>	

## Returns

3.54.3.10   `JSONObject de.uulm.levazu.library.WebAPI.getShoppingListForCurrentUser (   )`

Fetches the current user out of the SQLite DB and returns the shopping list for his user id.

## Returns

ShoppingList as JSONObject

3.54.3.11   `Product [] de.uulm.levazu.library.WebAPI.getUnknownProduct ( String pUnknownItem, String pAction )`

[ShoppingListFunctions#getUnknownProduct\(String, String\)](#)

## Parameters

<i>pUnknownItem</i>	
<i>pAction</i>	

## Returns

3.54.3.12 boolean de.uulm.levazu.library.WebAPI.isCheapestInShop ( Product *pProduct*, int *pShop* )

[ShoppingListFunctions#isCheapestInShop\(Product, int\)](#)

## Parameters

<i>pUnknownItem</i>	
<i>pAction</i>	

## Returns

3.54.3.13 boolean de.uulm.levazu.library.WebAPI.isProductInShop ( Product *pProduct*, int *pShop* )

[ShoppingListFunctions#isProductInShop\(Product, int\)](#)

## Parameters

<i>pUnknownItem</i>	
<i>pAction</i>	

## Returns

3.54.3.14 boolean de.uulm.levazu.library.WebAPI.isUserLoggedIn ( Context *context* )

Andy [UserFunctions#isUserLoggedIn\(Context\)](#)

## Returns

3.54.3.15 JSONObject de.uulm.levazu.library.WebAPI.loginUser ( String *pEmail*, String *pPassword* )

[UserFunctions#loginUser\(String, String\)](#)

## Parameters

<i>pEmail</i>	
<i>pPassword</i>	

## Returns

User as JSONObject

3.54.3.16 `boolean de.uulm.levazu.library.WebAPI.logoutUser ( )`

[UserFunctions#logoutUser\(Context\)](#)

Returns

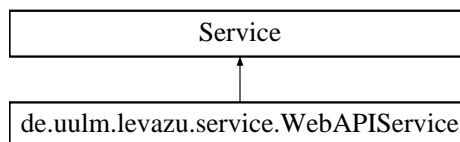
### 3.54.4 Member Data Documentation

3.54.4.1 `String de.uulm.levazu.library.WebAPI.API_URL = "http://mobile1.informatik.uni-ulm.de/websrv/"` `[static]`

URL to the Web-API

## 3.55 de.uulm.levazu.service.WebAPIService Class Reference

Inheritance diagram for de.uulm.levazu.service.WebAPIService:



### Classes

- class [WebAPIServiceBinder](#)

### Public Member Functions

- IBinder **onBind** (Intent pIntent)

### Static Public Attributes

- static final String **ACTION\_BROADCAST** = "de.uulm.levazu.intent.action.WEBAPISERVICE"

### Private Attributes

- [WebAPIServiceBinder](#) **mBinder** = new [WebAPIServiceBinder](#)()

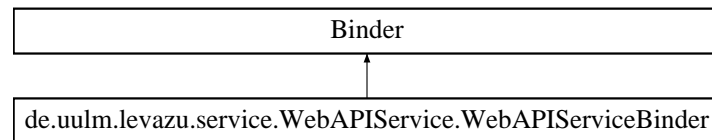
### 3.55.1 Detailed Description

Author

vlad

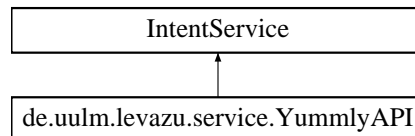
## 3.56 de.uulm.levazu.service.WebAPIService.WebAPIServiceBinder Class Reference

Inheritance diagram for de.uulm.levazu.service.WebAPIService.WebAPIServiceBinder:



### 3.57 de.uulm.levazu.service.YummlyAPI Class Reference

Inheritance diagram for de.uulm.levazu.service.YummlyAPI:



#### Static Public Attributes

- static final String **FRIDGE\_LIST** = "fridge\_list"
- static final String **GROCERY\_LIST** = "grocery\_list"
- static final String **TO\_BUY** = "tobuy"
- static final String **RESULT** = "result"
- static final String **RECIPES** = "recipes"
- static final String **NOTIFICATION** = "de.uulm.levazu.service.YummlyAPI"

#### Protected Member Functions

- void **onHandleIntent** (Intent pIntent)

#### Private Member Functions

- void **publishResults** (int pResult, [Recipe](#)[] pRecipes)

#### Private Attributes

- int **mResult** = Activity.RESULT\_CANCELED
- [Recipe](#)[] **mRecipes** = {}

#### 3.57.1 Detailed Description

Service which sends requests to our web-server Yummly API.

Author

vlad

#### 3.57.2 Member Data Documentation

##### 3.57.2.1 [Recipe](#) [] de.uulm.levazu.service.YummlyAPI.mRecipes = {} [private]

The recipes returned from the YummlyAPI Service.

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