

CS102	Spring 2018/19		
Instructor:	David Davenport	Project Group	1E
Assistant:	Mustafa Duymuş		

~ UNeed ~

fıstıkçı_şahap

**Murat ANGIN, Can ALPAY, Ümit BAŞARAN, Ayberk YILMAZ,
Elham AMİN, Emre YILDIZ, Yiğit ERKAL**

Criteria	TA/Grader	Instructor
Presentation		
Overall		

Detail Design

(v1.0)

21 May 2019

1. Introduction

UNeed is a shopping application especially focus on second hand items such as books and course materials for university students. Our purpose is making a great connection between customer and seller so as to make the life easier for university students.

In this report, we will show the details of UNeed application such as UML diagrams, class hierarchies.



2. Details

The real work goes here! Replace section titles with something relevant to your report.

2.1 System Overview

The program is based on mobile phones with Android. There is a website which has RESTful API and database. When user wants to take action, a connection is established between database and app by RESTful API.

Tools that we will use:

- MySQL for the database
- PHP for back-end development
- Java for Android application
- JSON for pull data from website with http-GET request
- PhpMyAdmin for managing MySQL database

2.2 Core Design Details

2.2.1 Network

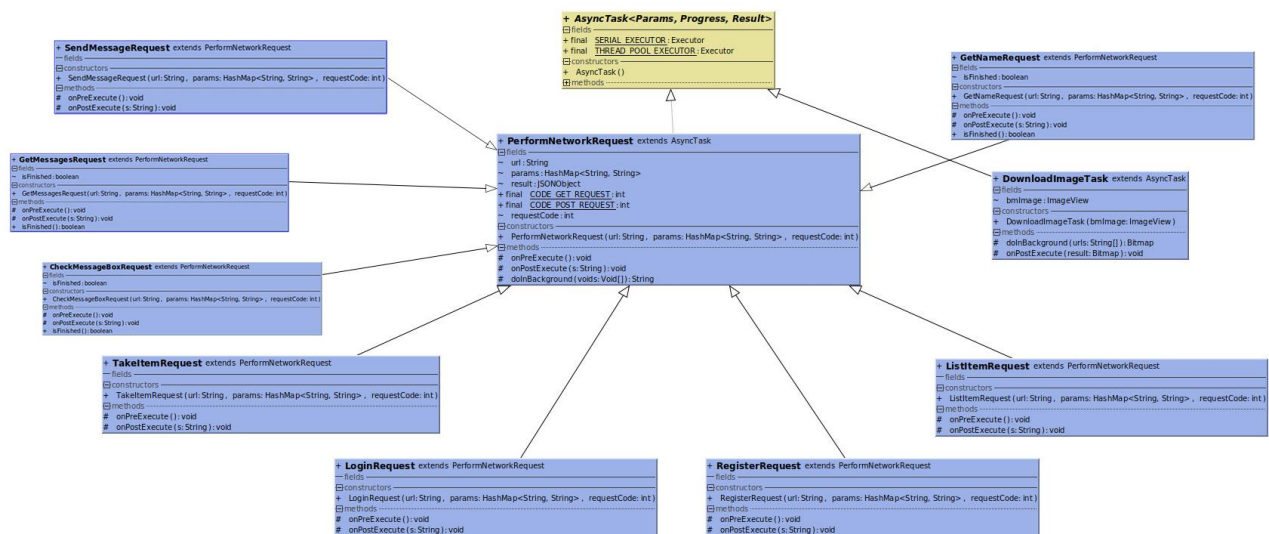


Figure-1

- **PerformNetworkRequest** extends **AsyncTask<Param, Progress, Result>**
 - o The main and fundamental request class for performing network processes.
- **DownloadImageTask** extends **AsyncTask<Param, Progress, Result>**
 - o Download item images from database.

- **TakeItemRequest** extends **PerformNetworkRequest**
 - A specific network class for taking item properties from database.
- **LoginRequest** extends **PerformNetworkRequest**
 - This class undertakes the login process between database and application.
- **RegisterRequest** extends **PerformNetworkRequest**
 - This class undertakes the register process between database and application.
- **ListItemRequest** extends **PerformNetworkRequest**
 - This class takes all items from database and adds this items in a list in MarketActivity.
- **CheckMessageBoxRequest** extends **PerformNetworkRequest**
 - This class possess the people that user had been talking to.
- **SendMessageRequest** extends **PerformNetworkRequest**
 - This class adds new message to the database (as a String).
- **GetMessageRequest** extends **PerformNetworkRequest**
 - This class pulls messages from database and shows to the user.
- **GetNameRequest** extends **PerformNetworkRequest**
 - This class gets the usernames from database whom the people in the message box.

2.2.2 API

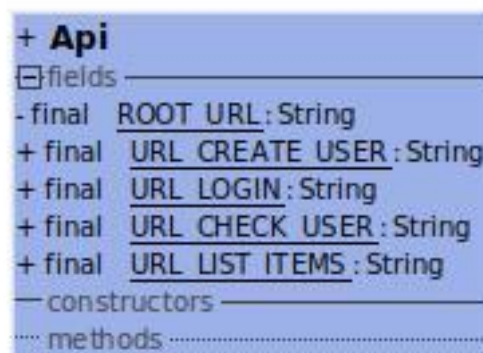


Figure-2

- In the future if the website (database) changes, the modification will be much simple and easier. Because of that the class holds the final properties of API calls.

2.2.3 Activities

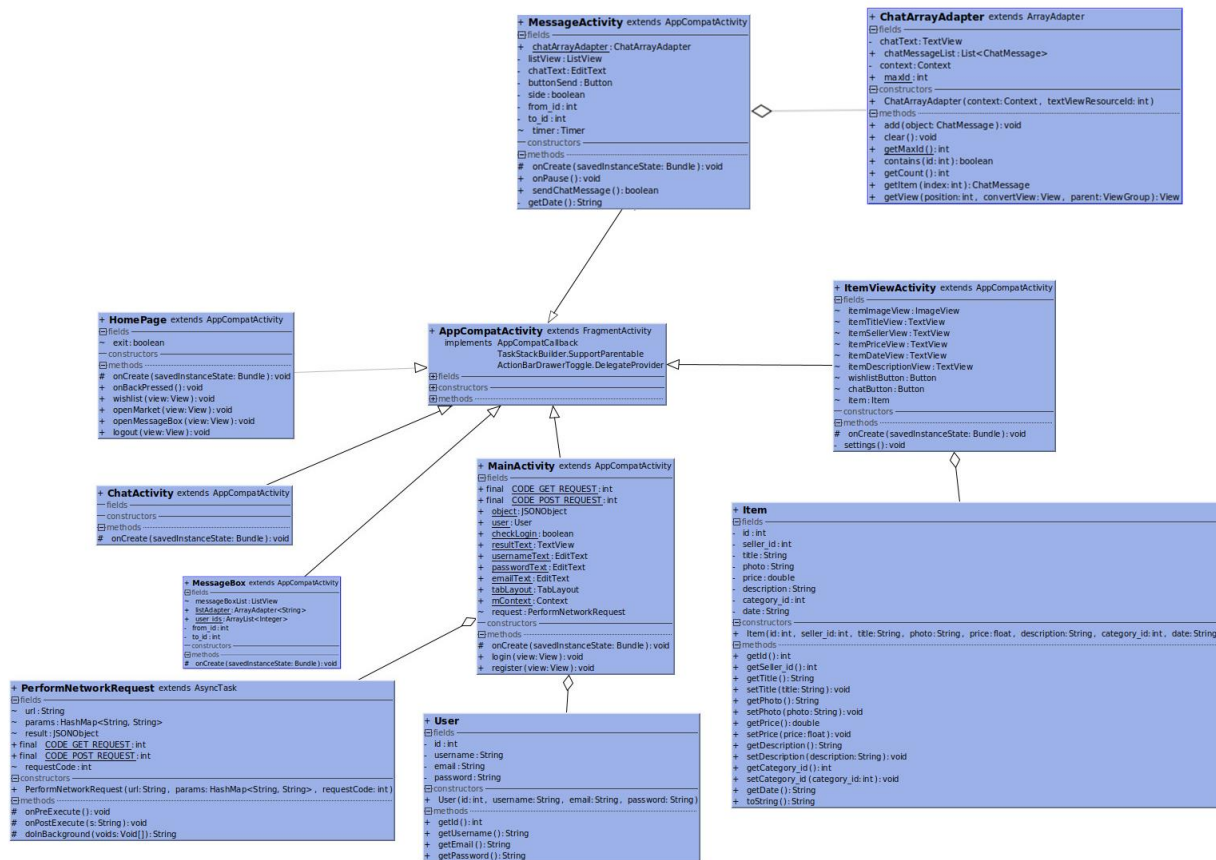


Figure-3

- **AppCompatActivity** extends **FragmentActivity**
 - This class is a default activity class that is provided by Android Studio. This class will be automatically extended by Android Studio when a new activity created.
- **MainActivity** extends **AppCompatActivity**
 - This class is controller for login and register page. It checks the elements whether enter correctly or not (username, password). For register side, it compares user's enters (which are username, password and email) with database whether they already existed or not.
 - **MainActivity** has_a **User**
 - User class contains properties such as userID, username and password.
 - When user logs the application MainActivity class creates an instance of User.

- **MessageBox** extends **AppCompatActivity**
 - This class holds the chat history that user made between other users.

- **HomePage** extends **AppCompatActivity**
 - This class creates a main menu which contains buttons to guide user.

- **ChatActivity** extends **AppCompatActivity**
 - Create a user interface when user want to contact with the seller.

- **ChatMessage**
 - This class creates an object for messages.
 - Properties are:
 - Boolean left (whether messages are on the left side or right side, to distinguish seller and buyer)
 - Int id (Message id, every message has a unique id on database)
 - String message
 - String date (date and time)
 - Int from_id (sender)
 - Int to_id (receiver)

- **MessageActivity** extends **AppCompatActivity**
 - This class creates a chat room between seller and buyer.
 - **MessageActivity** has_a **ChatArrayAdapter**
 - **ChatArrayAdapter** extends **ArrayAdapter**
 - This class holds the previous messages between the users and shows them when either ne of them enters the chatroom.

- **ItemViewActivity** extends **AppCompatActivity**
 - This class illustrates the item, its description, photo of it, price, seller and adding date to the marketplace.
 - **ItemViewActivity** has_a **Item**
 - Item class contains properities such as id, sellerid, title, photo, price, description, categoryid and date.

- **SortActivity** extends **AppCompatActivity**
 - This class presents options in order to sort market items by price, adding date or alphabetical.

```
+ SortActivity extends AppCompatActivity
fields
~ radioSort: RadioGroup
constructors
methods
# onCreate ( savedInstanceState: Bundle ): void
+ closeSort ( view: View ): void
```

Figure-4

- **FilterActivity** extends **AppCompatActivity**
 - This class presents filter options to user, price or lesson (such as MBG110).

```
+ FilterActivity extends AppCompatActivity
fields
~ rangeSeekBar: CrystalRangeSeekBar
~ tvMin: TextView
~ tvMax: TextView
~ category_spinner: Spinner
constructors
methods
# onCreate ( savedInstanceState: Bundle ): void
+ closeFilter ( view: View ): void
```

Figure-5

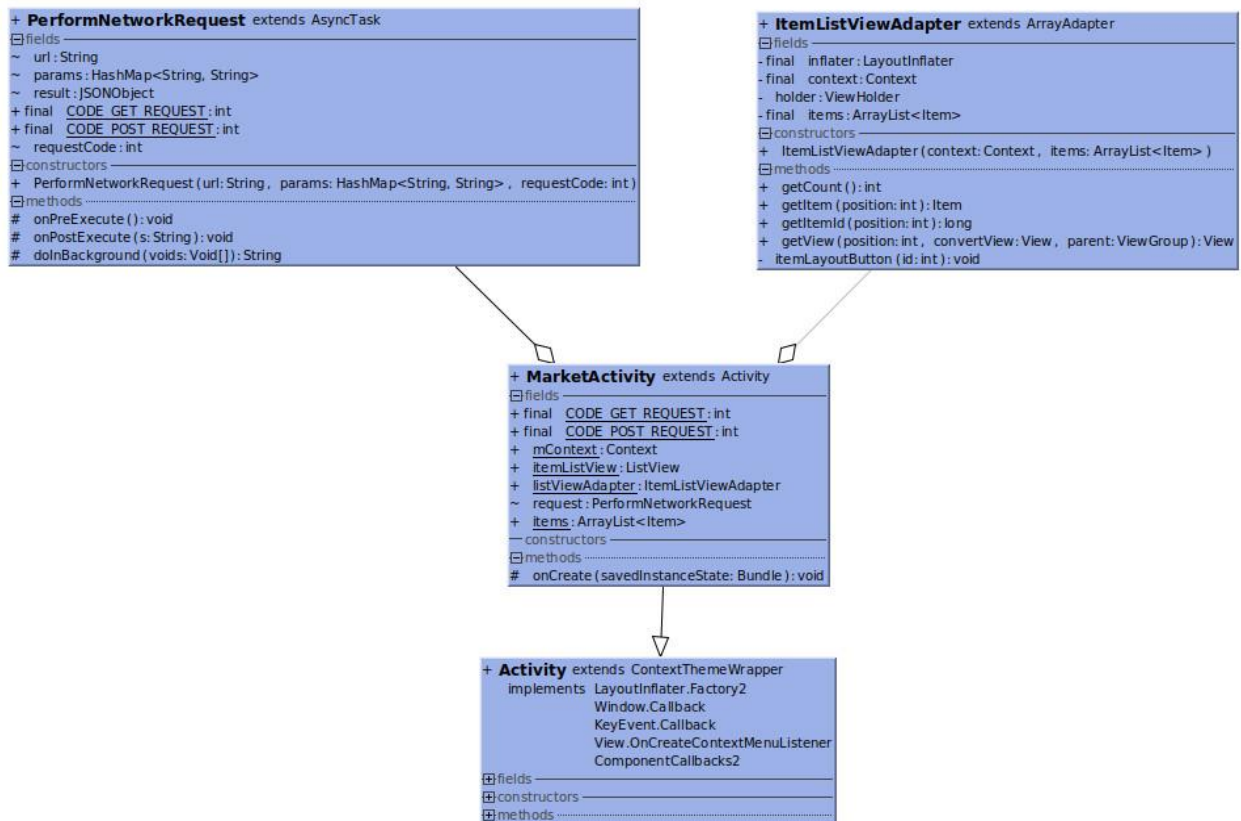


Figure-6

- **MarketActivity** extends **Activity**
 - This class basically provides a marketplace to user.
 - Class contains itemListView.
 - **MarketPlace** has_a **ItemListViewAdapter**
 - This class controls the itemListView.

3. Task Assignment

Murat Angın & Emre Yıldız – Database and Network Part
 Can Alpay – Main Activity
 Ümit Başaran – ItemViewActivity, MarketPlace Part
 Elham Amin – Home Page, User and Item classes
 Ayberk Yılmaz – General Design
 Yiğit Erkal – Chat Part