

Moodle Android App

Sai Deep (2012CS10223)
Mano Teja (2010CS50286)
TRK Saran (2010BB50042)

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1 Introduction

Our task was to design a frontend for the Moodle Android Application. We were provided with a locally deployable web2py server. We developed an android app which interacts with this server via API calls.

2 User Interface

2.1 Primary Screen

A layout with one field for entering username, one for entering password followed by a **Sign in** button.

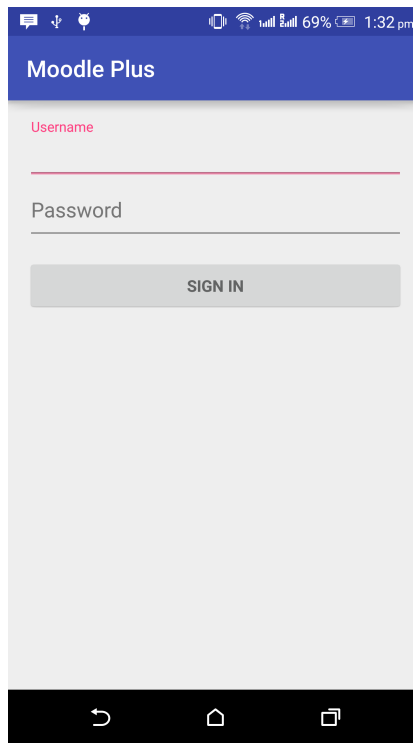


Figure 1: Primary Screen

2.1.1 Progress Bar

A progress bar appears on clicking sign in button when all the text inputs are non-empty and keeps spinning till response is received from server after which it disappears.

2.2 Welcome Screen - After Logging in

A list of registered courses are displayed. There are three buttons at the bottom of the screen for viewing notifications, grades and logging out.

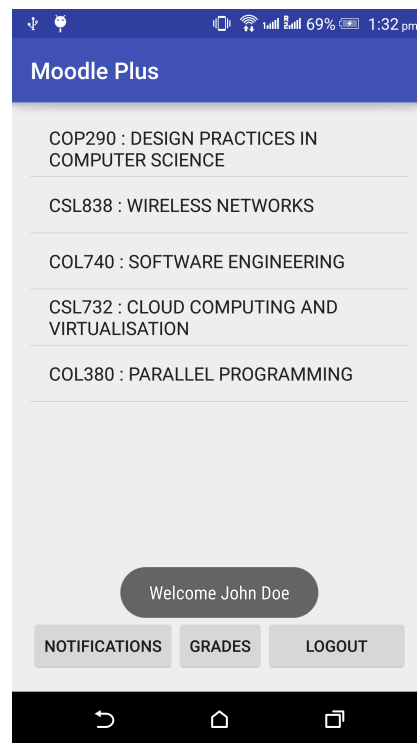


Figure 2: Welcome Screen

2.3 On Clicking Notifications Button

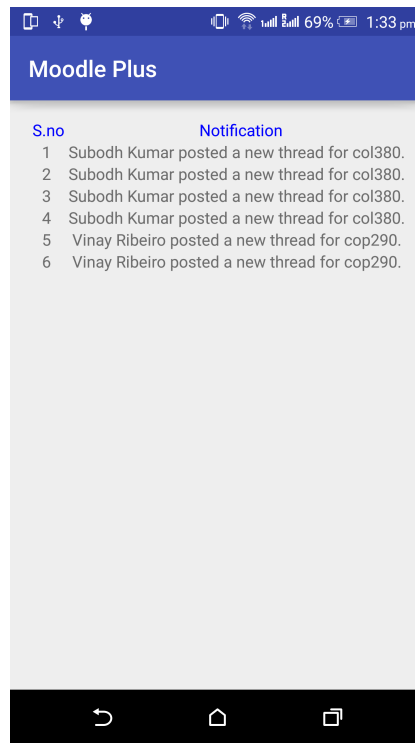


Figure 3: Notifications Screen

2.4 On Clicking Grades Button

Course	Grade Item	Score	Weight	Absolute n
COP290	Assignment 1	15.0/15.0	10.0	10.0
COP290	Assignment 2	10.0/20.0	15.0	7.5
COP290	Minor 1	25.0/30.0	25.0	20.83

Figure 4: All Grades Screen

2.5 On Clicking Logout Button

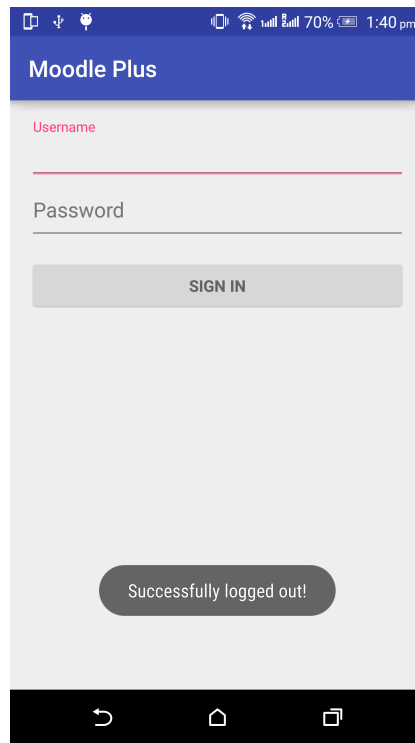


Figure 5: Successful Logout

2.6 Course Screen

2.6.1 After clicking on a particular course in home screen

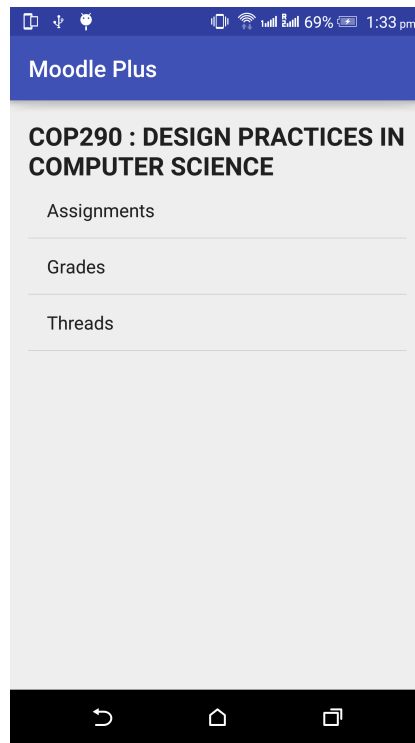


Figure 6: Course Screen

2.6.2 List of Assignments

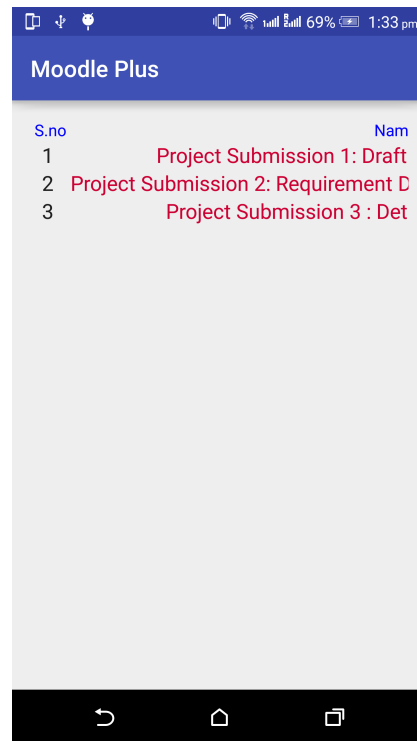


Figure 7: Assignments Screen

2.6.3 Assignment Information

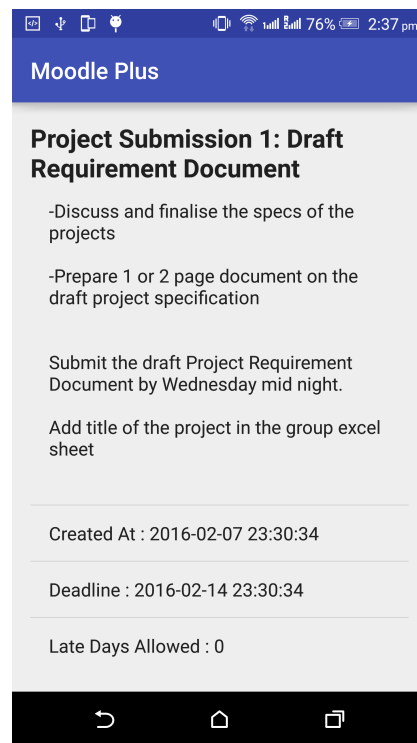
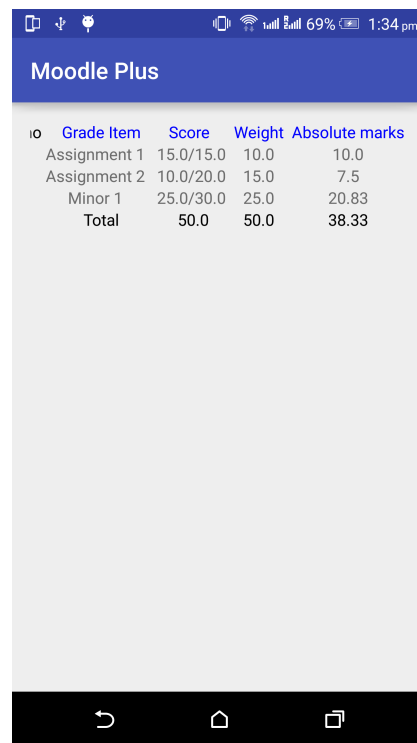


Figure 8: Assignment Information

2.6.4 Grades



The screenshot shows the Moodle Plus mobile app interface. At the top, there is a status bar with various icons and a battery level of 69% at 1:34 pm. Below the status bar is a blue header with the text "Moodle Plus". The main content area displays a table with the following data:

io	Grade Item	Score	Weight	Absolute marks
	Assignment 1	15.0/15.0	10.0	10.0
	Assignment 2	10.0/20.0	15.0	7.5
	Minor 1	25.0/30.0	25.0	20.83
	Total	50.0	50.0	38.33

At the bottom of the screen, there is a black navigation bar with three white icons: a back arrow, a home icon, and a square icon.

Figure 9: Grades of the course

2.6.5 List of Threads

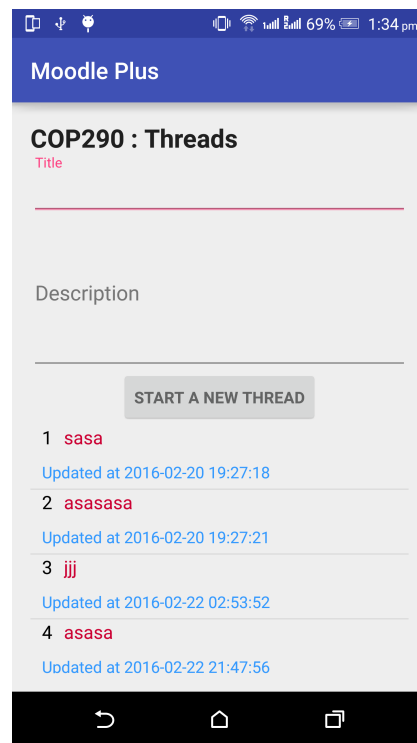


Figure 10: Threads

2.6.6 Thread Information and Comments

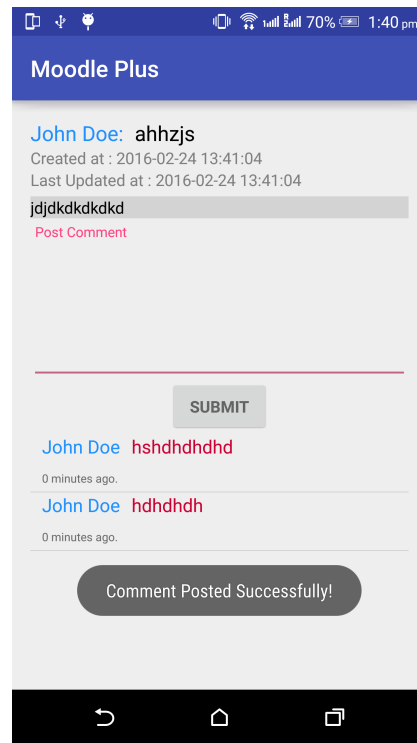


Figure 11: Thread Info

3 Implementation Details

3.1 Classes

The following classes were created for storing and handling necessary information from the HTTP GET response. All the classes below implement **Parcelable**[2] interface to pass data from one activity to another activity.

3.1.1 User

3.1.2 Course

3.1.3 AssignmentInfo

3.1.4 Grades

3.1.5 Thread

3.1.6 Thread_Comments

3.1.7 Notification

3.2 Activities

3.2.1 LoginActivity

The initial activity of the application where the user is expected to login his credentials. If the credentials are incorrect, a toast message is displayed conveying the same. On successful login, the JSON response from the server is parsed and the necessary information is stored in an object of **User** class and this information is passed to the next activity (**CoursesList**).

3.2.2 CoursesList

This activity corresponds to the Welcome or Home screen where all the registered courses are listed. On clicking any particular course, it redirects to CourseContent activity.

3.2.3 CourseContent

This activity is for displaying various contents of the course like Assignments, Grades & Threads.

3.2.4 CourseGrades

This activity is for displaying the grades of a particular course.

3.2.5 ListofAssignmnets

This activity is for displaying the list of assignments of a particular course.

3.2.6 AssignmentInfo

This activity is for displaying the information of a particular assignment like description,late days available,deadline etc.

3.2.7 ThreadsList

Facilitates posting of new threads apart from displaying the list of threads.

3.2.8 ThreadInfo

Facilitates posting of comments to any particular thread apart from displaying the information of the current thread.

3.2.9 GradesAll

For displaying grades of all registered courses in one screen.

3.2.10 Notifications

3.3 Methods for network communication

In this assignment, we used Android provided **HttpURLConnection** and **URL** classes to handle HTTP GET requests.[1].

3.3.1 Cookie Handling

We used Android provided **CookieHandler**,**CookieManager** classes to manage cookies.

4 VCS

The code for the project is being maintained in this repository:

<https://saideepbsd@bitbucket.org/saideepbsd/a1.git>

References

- [1] Httpurlconnection. <http://developer.android.com/reference/java/net/HttpURLConnection.htm>

[2] Parcelable. <http://developer.android.com/reference/android/os/Parcelable.html>.