

COP290: Moodle App

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October 4, 2018

This Android Application is a simpler version of moodle app, allowing the users to login and check their courses, assignments and grades,etc. The user can also add discussion threads related to some course and also comments to any existing thread. A web2py server has been provided which interacts with the app, and to which the API calls are sent.

1 User Interface

- This application consists of three screens :
 - **Login Page** : The login page welcomes the user to the app and allows to sign in using valid username and password.
 - **Courses** : This is the home screen, where all the registered courses (Course code and course name) of the user are displayed on cards. On clicking a card, the user is redirected to the corresponding course. Other than this, we have a drop down menu at the top right corner, which has the name of the user who just logged in, and the options of Courses, Grades, Notifications, and Logout.
 - **Grades** : This screen displays all the grades of the user for all the assignments, and exams. Each card shows the course code, grade item(assignment or exam), score, weightage of that grade item in the course and the corresponding absolute marks.

- **Notifications** : This screen displays all the notifications of any new thread added! Selecting any notification redirects the user to the page of corresponding thread.
 - **Thread** : This screen displays the data corresponding to the thread selected. It includes all the comments added along with the one who posted it and also the option of adding a comment to it.
 - **New Thread** : This screen displays 2 text views, Title and Description. The user can enter the information and then press the Submit button, which redirects the user to the Course tab.
 - **Course** : This screen consists of 3 tabs namely Assignments, Grades and Threads of that course. In the **Assignments** tab, tapping on any assignment redirects the user to that assignment. The **Grades** tab shows all the grades for that assignment. In the **Threads** tab, all the threads for that course are viewed. We also have an option of adding a new thread using a button, which redirects to the New Thread tab.
 - **Assignment** : This screen displays all the information about the assignment which includes the course title, the description, when was it created and the deadline.
- **Animation** - Used Recycler view to render card views which shows details regarding each course, each grade, each assignment or each thread. [1]
The application uses Pager-sliding Tab Strip, to implement the tabbed activity used for the Courses Page where Grades, assignments and threads have been distributed into 3 tabs.
 - Buttons** - There are various Submit buttons like on the Login page, Add Thread, Submit comment, etc. Also there is a drop down menu where each of the option is clickable leading to a new page.

2 Implementation Details

- The server is hosted at web2py server which is locally deployed. The app then interacts with the server via API calls.

- Since every page needs to display the number of cards according to the response from the server, we keep adding them dynamically using the RecyclerView adapter. [2] [3]
- For the tabbed view of the Course page, Pager-Sliding Tab Strip is used. First on creation, the data is retrieved using the Java class "JSONCourse". Then, this data is sent to the 3 fragments using data bundles and passed through intents. On the fragments, the data is then extracted and displayed. [2] [3]
- Various Java classes were implemented to extract the data received from the JSONresponse. Every time the response is received, an object from a class is created, and a function "call" is called which extracts all the data from the response and are loaded into the fields of that object, which can now be used for further processing.

The code for the project is being maintained in this repository:
<https://github.com/Shardul-Tripathi/MoodlePlus.git>.

References

- [1] Card view. <http://developer.android.com/training/material/lists-cards.html>.
- [2] Github android guides.
https://github.com/codepath/android_guides/wiki.
- [3] Youtube video tutorials. <https://www.youtube.com>.