

CTIS 487

Mobile Application Development

PROJECT

2023-2024 Fall

Deadline : 15.12.2023, 23:55

Team Size: Minimum 3, Maximum 4 students (from any sections)

Presentation: The team (all members) will demonstrate their project on a laptop at my office by getting appointment from moodle.

Submission: All project source codes must be uploaded to moodle by one of the team members.

Team work: Each team member will be responsible from a particular part of the project.

- Cheating is strictly prohibited. Otherwise, all team members get zero.
- In the demonstration, I'll ask questions to all team members about the project. I'll assess your grades based on your answers. You'll get grades depending on your contribution to the project.
- 20 points penalty for late submission. The submission will be closed on 15.12.2023, 23:55
- You can implement your project by using **Kotlin** or **java**.
- Total point will be converted to 100

Form your team and submit a document to course moodle page which contains the proposed project topic, details of your project (such as which operation can be done, requirements of project) and the names of team members until 16.10.2022, 23:55 **(3pts)**.

The proposed project must cover the following requirements:

- The project must be created such that it will be capable of running on any Android enabled mobile device (i.e., use multiple resolutions for the images).
- <https://material.google.com/style/icons.html>
https://developer.android.com/guide/practices/screens_support.html
<http://iconhandbook.co.uk/reference/chart/android/>
- Create your own custom **application icon** (5pts)
- **Make sure that the designed UI is professional looking. Quality, effort and time allotted for the project.** It must be different than the lab guides **(18pts)**.
- Use material design (<https://material.io/>) for at least 2 views (components) for the UI
- The project must use at least one **gesture** (8pts).
- The project must use **RecyclerView** (5pts).
- The project must use **Fragments (fragments has to interact with each other)** (10 pts).
- The project must use **database** to store application related information (e.g. for a game, high scores can be saved in a database). **(8pts)**
- The project must use Retrofit to parse **JSON** (which contains some data related you're your application) **(15pts)**.

- The project must use **Service** (use WorkManager) to handle background operation **(15pts)**.
- The project must use **sound file (4pts)**.
- The project must use **at least one extra package (project folder to store Kotlin/java files)** (3pts).
 - Sub package under root package of project
- The project must use at least one **external library (5pts)**.
 - Use different external library than Volley, Picasso, Glide libraries.
 - Some external libraries: gson, validation libraries, animation related libraries or libraries which can be alternative of RecyclerView
- Provide a **brief testing report** of your application against multiple real mobile devices by using AWS Device Farm. <https://aws.amazon.com/device-farm/>
 - A different **testing tool** also could be used. AWS requires credit card number, a certain amount is withdrawn but later that amount is returned. Credit card is used to identify you are the right person. Also creating an account on AWS takes time **(5pts)**
- How to upload an app to Google Play Store? Each group member must know the steps of it **(10pts)**. You may not create the google account because of the payment but this time all the group members must know what should be done to upload application to google playstore.