

# CTIS 487: Mobile Application Development

## Project Details 2022-2023 Spring 15%

Instructor: Neşe Şahin Özçelik

Form a team with maximum 3 members and submit a document to course moodle page which contains the **proposed project topic**, details of the project (such as which operation can be done) and the names of **team members** until **27.02.2023**, 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](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 (20pts).**
- Use material design (<https://material.io/>) for at least 2 views (components) for the UI
- The project must use **gestures** (10pts).
- The project must use **RecyclerView** (15pts).
- The project must use **Fragments (fragments has to interact with each other)** (15 pts).
- The project must use **SQLite database** to store some information (e.g., for a game, high scores can be saved in a database). (15pts)
- The project must use **JSON** parsing to display some information (20pts).
- The project must use **Service** (use IntentService) to handle background operation (20pts).
- The project must use **sound file** (5pts).
- The project must use **at least one extra package (project folder to store java files)** (5pts).
  - Sub package under root package of project
- The project must use at least one extra **jar file (external library)** (5pts).
  - Use different external library than Volley, Picasso, Glide libraries.
  - Some external libraries: gson, validation libraries, animation related libraries etc.
- 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 AWS requires credit card number, a certain amount is withdrawn but later that amount is returned.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 (10pts).
- Teams should **submit** the **source code** of their project through the Moodle page and demonstrate the project to the instructor in his/her office or Lab8 **until 01.05.2023, 08:30 a.m.**
- Project is over 100pts. Given points will be subtracted if they are not implemented.
- Late submissions will not be accepted.

- Each student or team should implement the project on their own. Any plagiarism attempts will be severely penalized and necessary disciplinary action will be taken based on departmental policy.
- You need to upload your project **to google market**. If you **cannot** because of the **fee**, this time each group member need to explain which steps must be followed from Android Studio to build the project and form google play store. Which steps must be followed must be explained (5pts).
- Submission of project to moodle is not enough. Project must be **presented** to course instructor. Getting appointment from course instructor is your responsibility. **Students who do not present their project will get zero**. During presentation, you need to execute the application on a **real device**. Also course instructor will ask question about the statements so that code part will be reviewed.
- Only one submission to moodle page by a group member is enough. All group members must attend to project presentation. Group member who do not attend to project presentation will get zero (0) from project.
- Project is over 100 points. Given points are the points that will decremented if the requirement is not implemented or not done.

**Utilize sustainability is the theme in the Bilkent University 2021-2022 academic year. You can select a project related with "Sustainability".**

"**Sustainability** means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources. Sustainability is not just environmentalism. Embedded in most definitions of sustainability we also find concerns for social equity and economic development. While the concept of sustainability is a relatively new idea, the movement as a whole has roots in social justice, conservationism, internationalism and other past movements with rich histories. By the end of the twentieth centuries, many of these ideas had come together in the call for 'sustainable development.' "

If you need to put your files (json) to a host, following hosting services can be used.

- <https://infinityfree.net/>
- <https://tr.000webhost.com/>
- <https://aws.amazon.com/> (it requires credit card info for \$1 and return 1\$ in 3 days)
- You may find other web hosting