

AAD Specialization Capstone Project Overview and Requirements

Overview

The *Android App Development* (AAD) Specialization comprises four content area MOOCs, plus a final Capstone MOOC. Projects in the Capstone MOOC give Signature Track students who passed all previous MOOCs in the AAD Specialization an opportunity to integrate and demonstrate the knowledge they've acquired across the four earlier content area MOOCs. A good Capstone project involves building a mobile app that leverages services running in a computing cloud accessed over the Internet to support one or more users.

The AAD Capstone MOOC will offer learners a more open-ended project to work on compared to previous MOOCs in the AAD Specialization. The project is described by a lightweight project specification, allowing learners to choose how to implement specifics. Learners will design and implement their applications and will be expected to complete it over roughly four weeks working roughly 8-12 hours per week (though learners are free to devote as much time as they'd like to the project).

As with the other MOOCs in the AAD Specialization, learners can post questions about their project to project-specific sub-forums accessible from the Capstone course's online forum pages. The instructors and members of the AAD community will provide feedback on the questions as time permits.

Basic Project Requirements

As mentioned above, the design goals of the individual project that learners work on will incorporate lessons learned from each of the previous MOOCs in the AAD Specialization.. Each project's specification clearly outlines the app's intended high-level behavior, yet leaves substantial room for individual creativity. Students will therefore need to flesh out many important design and implementation details. The final submission of your project's app must:

- Have a new private GitLab repository for their project with a README.md that explains their application at a high level and makes use of markdown to better format the page's presentation.
- Compile and execute properly without crashing
- Comprise at least one instance each of the following fundamental Android component categories covered in the four previous Content MOOCs in the AAD Specialization:
 - Activity
 - BroadcastReceiver
 - Service (Bound or Started)
 - ContentProvider.
- Interact with at least one remotely-hosted web service over the network via HTTP.

- Allow users to navigate between at least two different user interface screens at runtime, e.g., a hypothetical RSS/Atom reader app might have multiple screens, such as
 - a ListView showing all RSS Feed Stories,
 - a detail View showing a single Feed Story, and
 - a Settings view for configuring information about the App's settings.
- At least use the Junit testing framework to implement unit and integration tests for their application, and the tests must cover the functionality of the app. Additional testing frameworks, such as Espresso, may also be used if desired.
- Support persistent storage of information in an app's content provider.
- Have well documented source code and a short video that shows how your app works when it's run.

You are welcome to leverage portions of projects from the AAD Specialization MOOCs as the foundation for your own new app. However, you must make **substantial** effort to expand upon and/or customize the code provided.

Capstone Execution and Evaluation

The Capstone runs four weeks, plus an extra week for peer evaluation of the final project submission. There will be milestone submission each week, though you are free to submit your solution prior to that point if you finish early. The goal of this incremental timeline is to ensure you have a working project that can be demonstrated in several ways outlined below. You must complete your final submission by the end of the 4th week so that peer-evaluation to be completed on time.

You must evaluate 3 submissions before unlocking your submission's evaluations. This process is done to expose you to others' programming and provide a chance to both learn from constructively critique a wider range of projects. The exact grading rubric questions and possible responses for each milestone and final submission are available for download as PDF files. These files are optional, however, since the exact same questions will be on the assignment peer-evaluation page