CMU 04-801 C3: Advanced Mobile Application Development
Project

Choosing a project and team

You'll be working on one mobile app project throughout the semester, so think of an idea that you're interested in and excites you! The result should be a production-level app that is well designed, easy to use and solves a problem for your target user.

Requirements:

- Multiple activities/fragments
- A well organized and structured app
- A well thought out and implemented organization and flow
- A clear user interaction model
- A comprehensive data management strategy
- Adapt to all supported device configurations
- Use of Material Components
- Consistent theme throughout the app including custom launcher icons

This project can be done individually or in a team. The ideal size for a team is 2-3 class members. This should be a collaborative effort. How each team delegates the work is up to the discretion of the team members and each student will be held responsible for their work.

Agile Development Process

https://zenkit.com/en/blog/agile-methodology-an-overview/
Agile is a development process where you break up projects into smaller chunks of work called iterations, or sprints, so you can quickly define, create, and iterate. This lifecycle makes it easier to adapt to user feedback and react to business changes. It provides the agility to both create and respond to change. As we only have 7 weeks we'll be following an abbreviated version of this process that will include two iterations/sprints.

Phases

- Envision (vision)
    - Product vision - *what* to deliver
        - What is the customer's product vision?
    - Product scope
        - What is the scope of the project and its constraints?
    - Project community
        - Who are the right participants to include in the project community?
    - Project team organization
        - How will the team deliver the product?
    - Outcome
        - **Project vision** (charter)
            - Objectives
            - Scope/boundaries
            - Product description/summary statement

            - Target customer
            - Key benefits
            - Purpose
- Speculate (plan)
    - Refine information gathered in the Envision phase
    - Expand the product vision into more detail
    - Transform requirements into detailed features
        - A feature is a piece of functionality that focuses on a specific business need
    - Prioritize feature list and features from previous iteration
    - Estimate the workload for each feature
        - In the first iteration you should estimate the work effort for all features
        - In future iterations estimates might need to be adjusted
    - Identify features for upcoming iteration
    - Outcome
        - **Iteration plan**
            - Feature list for the current iteration
            - Once the scope of an iteration is agreed upon it should not change
- Explore (create)
    - Specifications and design are implemented
    - Daily stand-up meetings
        - Report progress
        - Identify issues
    - Outcome
        - **Implemented plan/feature list**
        - The explore phase ends either when the planned features for the sprint are completed or when the time allocated has been reached.
- Adapt (review)
    - Capture, share and apply lessons learned
    - User feedback
    - Set/adjust expectations
    - User, technical, and business review
    - Outcome
        - **Lessons learned**
            - What did and did not work?
            - Changes to be made
            - User feedback
    - Adaptive actions are incorporated into the next iteration
    - Proceed to speculate phase for next iteration or close phase to end the project
- Close
    - Deliverables are completed
    - Capture lessons learned
    - Outcome
        - **Lessons learned**
            - Agile process
            - Development effort
            - Future plans