UF UNIVERSITY of FLORIDA
Herbert Wertheim College of Engineering

Computer Engineering
CEN3907C

M1: Pre-Alpha Build

Overview

Your team will build an initial ***pre-alpha build*** demonstrating the architecture of your project. The pre-alpha build need not be fully functional, but it should demonstrate how your systems fit together based on the design mockup submitted previously. The pre-alpha should not involve implementations of all aspects of every feature; instead, it should focus on inclusion of those elements which most directly influence or are influenced by the system's architecture. The goal of the pre-alpha build deliverable is to identify exactly how the project will be structured and to provide a foundation for the design prototype. The pre-alpha build should represent approximately 20 hours of work per team member, or about 60-100 person-hours for the entire team (not including design documentation).

Specification

The deliverable should meet the following requirements. As each design project is unique, it is natural that projects may not spend time equally on all areas herein. The following information is provided in addition to the ***General Project Requirements*** (see M0 specification).

Effort

The prototype's progress (including preparatory research / evidence gathering, experimentation, design, and implementation) must be commensurate with approximately 20 hours of work per team member. As such, experimentation, failed attempts, and difficulties should be ***clearly documented***.

Architectural Elements

The build should provide an architectural skeleton that provides a clear foundation for the system's features and shows evidence of practicality.

External Interface

For at least one major use-case, the structure for mechanism for conveying information from the interface should be prepared. This must have a method to connect to the *persistent state*.

Persistent State

For at least one major use case, the structure of the data store for the project should be prepared. This must have a method to connect to the *external interface* and the *internal systems*.

Internal Systems

For at least one major use case, the structure for the data processing / handling step must be prepared. This must have a method to connect to the *persistent state*.

Information Handling

The build should provide structures to facilitate the handlings of information within the system. This includes transfer, verification of integrity, and as appropriate, recovery from corruption of data.

Communication

Structures should be prepared for processing of communication / signaling between components in the system and, as appropriate, between the system and outside entities.

Integrity & Resilience

The signaling system should provide a structure to handle information such that faulty information conveyance, benign interference, or malicious intrusion can be detected by the system. As appropriate, the structure of the system should facilitate recovery from data corruption.

Project Documentation / Submission

The Pre-Alpha submission must include the following components:

- A brief report that outlines the work done as it relates to the specification and rubric criteria.
- A link to the project repository.
- A link to a narrated video overview of the project components (<5mins).

In addition to all source code and hardware designs, the project repository should include a README outlining completed work, a description of the project's architecture, and all known bugs. **Failure to document bugs is grounds for grade reduction.**

It is also ***critical*** that all teams have time-stamped third-party evidence (e.g., remote source code repository pushes, online documents, and/or action logging) of all effort invested in the project. Teams may include additional documentation, as necessary, to demonstrate the work completed. **Failure to establish sufficient evidence to prove effort investment will result in a proportional grade deduction.**