EECS 22L: Taxi Cab Software Specification Grading Criteria

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February 17, 2017

The second deliverable in the *Taxi Cab* project is the software architecture specification that describes the data structures, software organization, as well as the development and **testing** plans. Similar to the user manual, this document can be refined in the following weeks so that it matches the actual implementation in detail. However, in contrast to the user manual which is intended to be read by the software user (consumer), the software architecture document is meant for the developers (producer) who implement the software components and later maintain the software product.

Specifically, the software architecture document should describe the overall software architecture, the installation and configuration of the source code, and in detail the data structures and algorithms used, together with all major functions and their parameters. Last but not the least, this document should describe a specific testing plan, including **unit test** for each module and **system test** for the entire flow.

For full credit (100%), the document submitted by your team should include the following sections:

Title page

- Software title, version

- Author/producer, affiliation

Front matter

- Table of contents

- Glossary (of terms used in the implementation)

1 Software Architecture Overview

    1.1 Main data types and structures

    1.2 Major software components

- Diagram of module hierarchy

    1.3 Module interfaces

- API of major module functions

    1.4 Overall program control flow

2 Installation

    2.1 System requirements, compatibility

    2.2 Setup and configuration

    2.3 Building, compilation, installation

3 Documentation of packages, modules, interfaces

    3.1 Detailed description of data structures

- Critical snippets of source code

3.2 Detailed description of functions and parameters

- Function prototypes and brief explanation

3.3 Detailed description of routing and scheduling algorithms

- description of routing algorithm
- description of scheduling and communication with the taxi

4 Testing Plan

4.1 Unit test of module 1

- Description of function tested
- Description of input test data
- Description of expected output data

4.2 Unit test of module 2

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5 Development plan and timeline

5.1 Partitioning of tasks

5.2 Team member responsibilities

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