ECSE 321 - Intro to Software Engineering
Software Architecture

Harley Wiltzer
Camilo Garcia La Rotta
Jake Shnaidman
Robert Attard
Matthew Lesko

February 19, 2017

Contents

1 Description

The software architecture comprises of two different patterns: a Model/View/Controller pattern and a Layered Architecture pattern. An "Authentication and Authorization" layer is on top of the MVC layer. Once the user is authenticated and authorized, they have access to the MVC layer. The MVC system contains three components which interact with each other:

- Controller
- View
- Model

The Model component manages the system data and associated operations on that data; it encapsulates all the entities that are part of the model (can be seen in the model class diagram). The View component defines and manages how the data is presented to the user. The Controller component manages user interaction (key presses, mouse clicks, etc.) and passes these interactions to the View and the Model.

2 Rationale

The MVC pattern was chosen because this allows the components to be changed independently. For example, adding a new view or changing an existing view can be done without any changes to the underlying data in the model. It allows the data to change independently of its representation and vice versa. It supports presentation of the same data in different ways with changes made in one representation shown in all of them. The Layered Architecture pattern was used because the user would need to first authenticate him/herself and then receive authorization in order to interact with the sublayer.

3 Block Diagram

.png `\AM@curr`