Assignment 7 - GROUP A7-8

Mass Transit Simulation – Mass Transit Simulation – Implementation & Demo

Overview

The objective of this assignment was to, as a group, revise the MTS design to accommodate additional requirements and implement a solution. In addition, a video demo of the solution is provided.

The Team

Martin Smith	msmith606
Yuxuan "Viktor" Mu	ymu32
Sean Matthews	smatthews39
Sebastian Sanchez	ssanchez44
Yevgen Kravets	ykravets3

Submission Organization

There are three main sections in the submission:

Functioning Application and Source Code

This section provide the details of the functioning application and the source code locations.

Demonstration Video

This section provides access to the video demonstration of the solution.

Design Documentation

This section provides several architectural diagrams that articulate the design of the solution.

1. Functioning Application and Source Code

The **functioning application** is packaged in the course provided VM. It can be retrieved from the following Box folder:

https://www.dropbox.com/sh/apbpz3xt17k5ft1/AAAaPQNOSXZafU1_fD4azl2ta?dl=0

Instructions on how to start the system were provided in the video and are also provided here, for convenience. The solution is a web app consisting of three main components, a Postgres database provided in the VM, a java server and a javascript UI. Once the VM has been started and the user is logged into the VM using the credentials provided in the assignment, the following steps should be followed to start the application:

1. **Ensure that the database is running.** The VM came with a Postgres database. This database should be running. The PGAdmin tool provided in the VM can be used to ensure that the database is running.
2. **Start the java server.** The Java server is located in **~/CS6310-summer-2018-A7-8/bin** and can be started by using the **mtsdb.sh** script.

   dependencies

   The have server is dependent on Jetty, Jersey and postgres jars to function properly. The required jars can be found in the VM at

   ~/CS6310-summer-2018-A7-8/bin/mts_lib

   The provided script **mtsdb.sh** should be run from the ~/CS6310-summer-2018-A7-8/bin location and is configured to properly set up the class path dependencies.
3. **Start the UI.** The UI is implemented as a browser based Single Page Application. It can be invoked, using **Chrome**, navigating to URL **http://localhost:6310.** For proper performance, please use the Chrome instance in the VM. The Java server acts as the web server for the UI and is configured to serve the web content from ~/CS6310-summer-2018-A7-8/bin/WebContent.
4. The **source code** consists of three main sections:

   Java - The source code for the Java server can be found in the VM at

   ~/CS6310-summer-2018-A7-8/workspace/MTS

   UI - The source code for the UI can be found in the VM at

   ~/CS6310-summer-2018-A7-8/workspace/MTS_UI

   Database - the database create script can be found in the VM at

   ~/CS6310-summer-2018-A7-8/bin/createDB.SQL

The above source code modules are also zipped up and submitted to Canvas as MTS.zip, MTS_UI.zip and createDB.zip, respectively.

2. Demonstration Video

A video demonstration of the application is provided. This can be retrieved via you tube by navigating to https://youtu.be/u2aostUznkQ

The video is also included in the VM. It is included in the UI and can be played by clicking on the video link in the front menu of the UI. The video file is located at ~/CS6310-summer-2018-A7-8/bin/WebContent/video/group_a7-8.mp4.

3. Design Documentation

In the following pages, several structural and behavioral architectural diagrams will detail out the design of the solution.