Theresa Pham

CSC 415: Software Engineering

Assignment 4

Open Source Software: Analysis & Design

How Requirements Are Met

Modularity & Encapsulation of Data:

The program will be modular in how it splits up the classes not only by the MVC

design pattern though use of Model, View, and Controller classes, but also by splitting

the classes to achieve high cohesion and low coupling where any controller classes and

functions within them have one task they are trying to achieve and are only taking

parameters from other classes that are needed for use. Because much of the data

within the program will need to be able to access each other, much of the data and

functions are made public for easy accessibility from other classes/files.

Elegance and Efficiency of Algorithms:

As the project is, there is no effective way or searching for an album. The user must

either find the URI of an album and paste that in, or drag the album cover in from

Spotify. For the creation of a searching functionality, albums specifically will be

searched for based on keywords. When an album is selected from the search results, it

will parse the JSON of the album for its URI in order to match the existing functionality

of the project and append the URI to the end of the open source project URL so when

the link is clicked, it will display the album's available markets on the map.

Appropriateness of Data Structures:

Heaps and arrays will be used by splitting JSON strings, and parsed through in order to get an album's URI to be applied to the open source project, as well as used to map album search results to a country so that a list of albums available in a country can be seen.