**Grant Harrison** ​​​ **CS**​​**3330**​​ **FINAL**​​ **PROJECT**​​ **DOCUMENTATION**

**UI**​ ​**Development:** This​ ​project​ ​was​ ​created​ ​using​ ​JavaFX.​ ​​​There​ ​are​ ​three​ ​.fxml​ ​documents in​ ​the​ ​project​ ​including​ ​Home.fxml​, Watchlist.fxml and​ ​Research.fxml

**Architecture:**

Model {​ ​Stock.java​, Switchable.java ​}  
View {​​ Home.fxml​, Watchlist.fxml, Research.fxml ​}  
Controller {​ ​HomeController.java,​ ​WatchlistController.java​, ResearchController.java ​}

**Required**​ ​**Elements**

1. Object​ ​Oriented​ ​Elements​ ​that​ ​you​ ​write​ ​the​ ​code​ ​for:

a. Classes

**Stock.java​, Switchable.java, ​HomeController.java,​ ​WatchlistController.java​, ResearchController.java, etc.**

b. Subclasses

**WatchlistController.java**​ ​**is**​ ​**a**​ ​**subclass**​ ​**of**​ ​**Switchable.java**

**(visible**​ ​**on**​ ​**line**​ ​**38** ​**of**​ ​**WatchlistController.java)**

* 1. At​ ​least​ ​one​ ​Abstract​ ​Class

**Switchable.java**​ ​**is**​ ​**abstract**

**(visible**​ ​**on**​ ​**line**​ ​**20**​ ​**of**​ ​**Switchable.java)**

* 1. At​ ​least​ ​one​ ​Interface

**Welcome.java**​ ​**is**​ ​**an**​ ​**interface**

1. Code​ ​elements​ ​that​ ​you​ ​utilize:

a. One​ ​or​ ​more​ ​collection​ ​classes  
 **I**​ ​**utilize**​ ​**an**​ ​**HashMap**​ ​**of**​ ​**Controllers**​ ​**in**​ ​**Switchable.java (visible**​ ​**on**​ ​**lines**​ ​**22 )**

b. Exception​ ​Handling  
 **There**​ ​**is**​ ​**exception**​ ​**handling**​ ​**on**​ ​**nearly**​ ​**every**​ ​**java**​ ​**file**​ ​**in**​ ​**the**​ ​**project (visible**​ ​ **in**​ ​**try**​ ​**catch**​ ​**blocks**​ ​**on**​ ​**lines**​ ​**166**​ ​**to**​ ​**182**​ ​**of**​ ​**WatchlistController.java)**

1. The​ ​application​ ​must​ ​have​ ​a​ ​clearly​ ​defined​ ​model

**The**​ ​**‘Models’**​ ​**of**​ ​**this**​ ​**is**​ ​**all**​ ​**located**​ ​**in**​ ​**the**​ ​**Stock.java**​ ​**file and the Switchable.java file  
It**​ ​**holds**​ ​**all**​ ​**the**​ ​**stock**​ ​**information**​ **in Stock.java and switchable info in Switchable.java**

1. The​ ​UI​ ​must​ ​utilize​ ​multiple​ ​scenes​ ​and​ ​at​ ​least​ ​one​ ​of​ ​the​ ​scenes​ ​will​ ​have​ ​the​ ​contents of​ ​the​ ​scene​ ​graph​ ​changed​ ​based​ ​on​ ​the​ ​application​ ​state

**This**​ ​**project**​ ​**has**​ ​**a**​ ​**main**​ ​**“Home”**​ ​**scene**​ ​**that welcomes the user to the app and gives them the choice of going to research or watchlist. It also has the Watchlist and Research pages. In the Research page the scene changes when the help button is pushed, it displays how to use the search ( in ResearchController.java lines 168 – 170 ). All the scene switching is handled in each function by the handleGoTo functions (ex. In ResearchController.java lines 146 – 155 )**

1. There​ ​must​ ​be​ ​a​ ​way​ ​to​ ​access​ ​“About”​ ​information​ ​that​ ​includes​ ​information​ ​about​ ​you and​ ​the​ ​application

**On each page in the menu bar you can access the help dropdown and select the about tab which will display a pop-up about me and my app.**

1. The​ ​application​ ​must​ ​save​ ​and​ ​load​ ​data.​ ​The​ ​target​ ​for​ ​saving/loading​ ​data​ ​can​ ​be​ ​files, a​ ​network​ ​service,​ ​or​ ​a​ ​database

**The**​ ​**application**​ ​**allows the user to both save and upload .json files from the Watchlist page. This allows the user to watch a stock take notes and save it to their computer in which they can re-open in the app later on to see how there analysis worked. The code for save and open is in Stock.java and WatchlistController.java**