Team Pear - Class Diagram Explanation:

What Diagram Conveys:

This UML class diagram visualizes the classes of Team Pear’s Dashboard Project program in a standard format. The Diagram shows the relationships and interactions between the classes of the program. The Controller class contains the main method where the program is run from. The controller makes a MainWindow object which acts as the Gui, displaying the dashboard and allowing the user to input the file they want to upload the visualization type they want.

Controller calls on professorMap which parses the specified CSV file and creates professor object based on the type of CSV file and stores them. The controller also calls upon errorHandling to ensure all data is correct.

Controller also calls on MainWindows which hosts the components of the QT gui.

MainWindow calls on filterDialog to filter data in the view,tablayoutwidget to create the tabs of the view, piedialog which creates the piechart which the data created from the model, bardialog is also called by main window to create the bar graph view. Different tree classes are used depending upon the type of csv opened and the type of bar graph being created.

Rationale for the Design:

The system design was based off the MVC(Model View Controller) design pattern. The Model consists of: professor, createProfessor, ProfessorMap, errorHandling, CSV\_parser, and modelExceptions.

The controller consists of the Controller class which contains the main method for the program.

The view consists of: MainWindow, filterDialog, tablayoutwidget, bardialog, granTree, presTree, pubTree, teacTree, statisticsTree, node, piedialog, piechartWidget.

The classes are modular and each contain the necessary methods it needs to execute a specific aspect of the program.