Use Case Diagram

This diagram displays the viable actions that the customer can take while interacting with our program. For the stage 1 demo they can both collapse/expand the headers of the data groupings and select a desired data date range. These two actions satisfy the customer’s request for the first iteration of our system. Our system present the user with a pie chart to display the data found in the csv. It also visually maps the data flow from the import of the CSV file to its eventual display. As demonstrated by the diagram, the hash is created from CSV and then this hash is then converted into a vector. This vector is then accessed in the View.

We chose to employ the model-view-controller design pattern. This means our system is split into three main parts: View, Controller, and Model. This modularity separates the display and the data processing which promotes system flexibility. Our design also focuses on encapsulation to hide system complexities in different layers. Our upper layers such as view do not see the data processing layers underneath. Encapsulation is critical to Object-Oriented design, it makes debugging and future implementations much easier in addition to making the program more readable.