PART 1: User stories

As a stock trader, I want to use this application to trade stocks online using the AmeriTrade API and utilize custom trading algorithms in my trades.
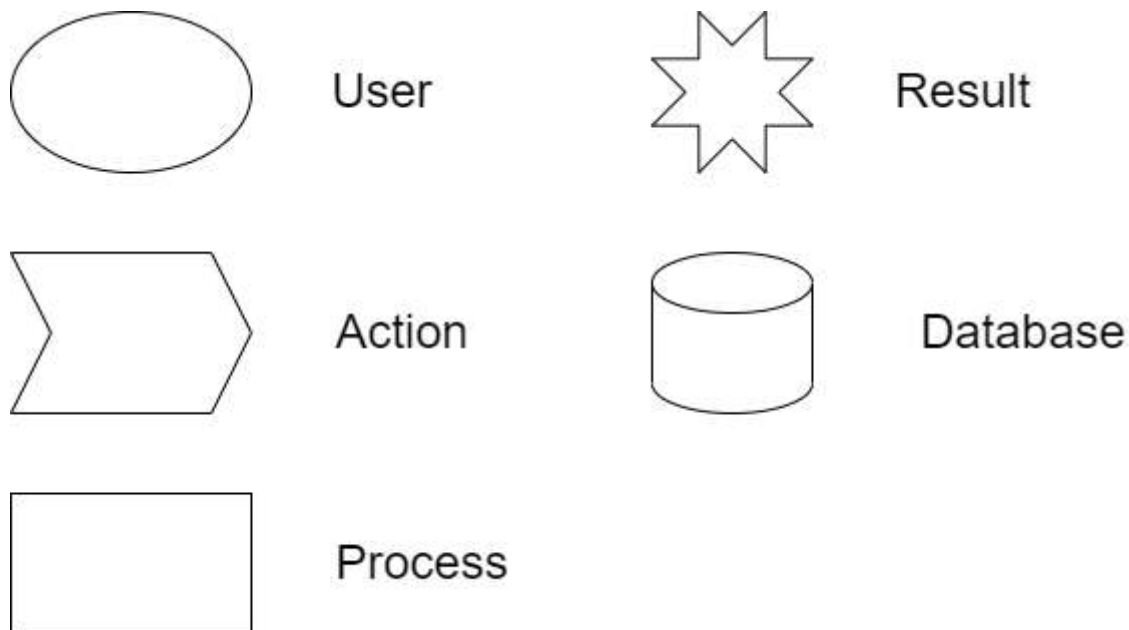
As a stock trading algorithm creator, I want to develop and test custom trading algorithms to find trends in data and better trade my stocks.

As someone new to trading stocks, I would like to learn how to trade stocks easily and learn how trading algorithms work.

As a learner who wants to know more about stocks, I would like a free and easily accessible platform to trade stocks on and test trading algorithms.
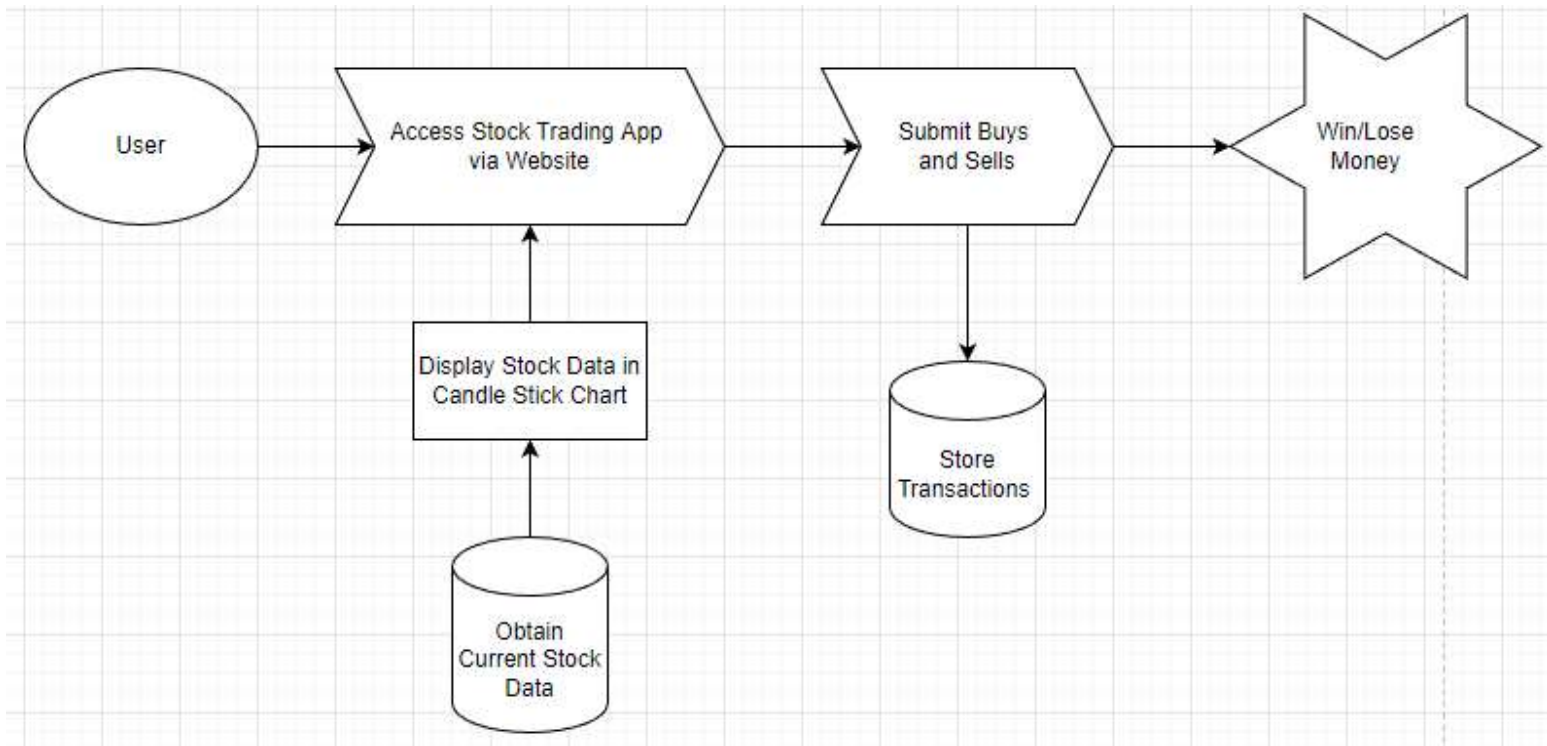
PART 2: Design diagrams

Design Diagram Key:

D0: In this diagram, the user (oval) takes the action of using the application (indented hexagon) to trade stocks (star)

D1: This diagram shows the user accessing the website, and then the user is shown a candle stick chart of a stock. The stock data is obtained via a MySQL database. The user then has the option to buy and sell stocks. Those transactions will then be stored in the same database in a different table. The user then waits to see how their investment pans out.

D3: This diagram shows the user accessing the stock trading website. They will be greeted by an account login screen. If they do not have an account, they will be required to make one. Their account information would then be stored in a database. Once logged in, the user will be shown a candle stick chart of the default stock. The user will then have the option to change the current stock, or they can change the time interval of the current stock. The settings will be pulled from the database. Once the user is happy with their settings, they can buy or sell stocks. These transactions will be stored in the MySQL database that will be linked to their account. Finally, the user sits back and sees how their investment does.