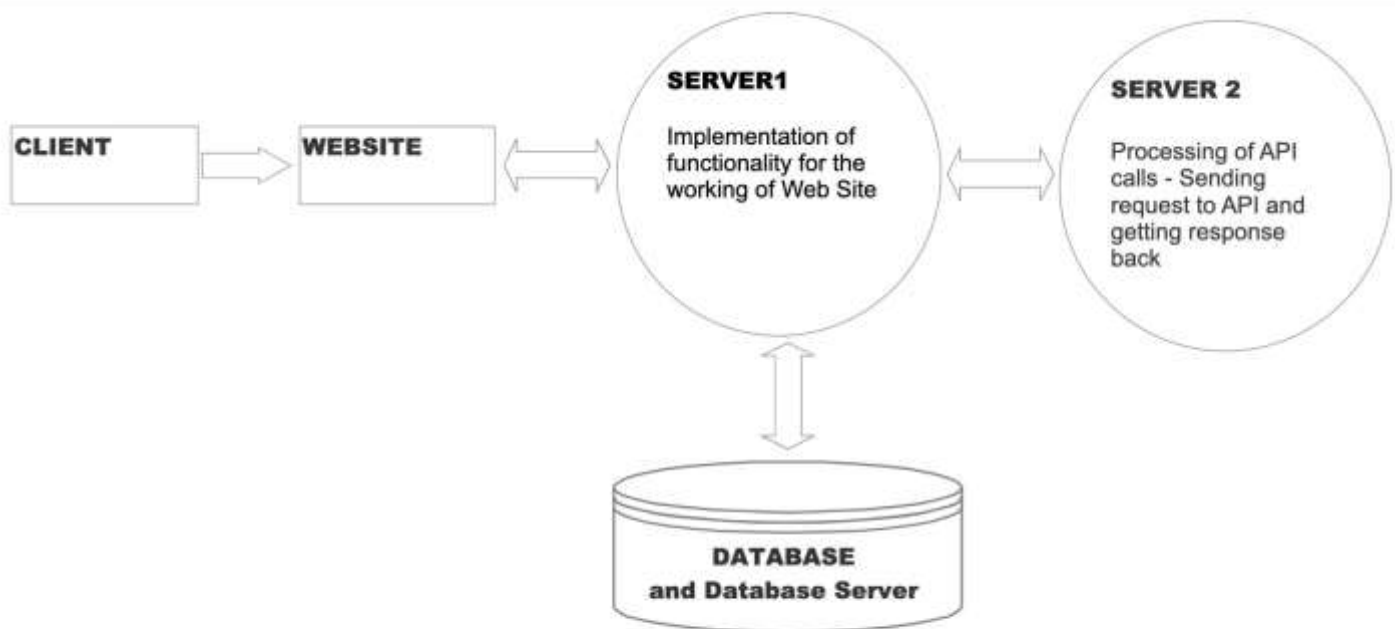


*\*The application is made according to the requirements mentioned in the “requirements.pdf” file as a capstone project for the Web Programming class \**

## **Architectural Diagram:**

### Stock Brokerage Web Application



## **Modules:**

## **Website:**

This is the front end and user point of contact to the webservices, the website implemented here has the functionality for the user to input the required data and make the required changes in the database, as well as log in as admin and set the number of bids to be allowed on a particular day and time. This platform gives user the ability to make bids as well as post the bids in their name for others to bid on. We have used bootstrap as our base to the website home page and developed other webpages around it.

## **Server 1 for Functionality:**

Server 1 is the second point of contact from the website, it receives data from the user and if any data need to be relayed to database it uses other HTTP protocol to communicate with the Server 2 and contact database. All the communications from website to the server 1 are through HTTP protocols. The main functionality of Server 1 is manipulation of data with accordance to the desired output for example the table data from the database need to be molded in the form of table to show the user in user-friendly manner and same goes to when data needs to be sent to the database. The calculation of time slots and displaying available time slot is processed here.

## **Server 2 for Web Services and other Features (API Calls):**

The implementation of Webservices and microservices is done here the functionality of authentication and rightful user is implemented here, this server also acts a relay and only way of communication between database and other entities, the interaction between two servers is done using HTTP protocol and RESTful services.

## **Database:**

Database is mainly used for storing and retrieving data for the functionality implementation, database used in this project is SQL as it's a relational database

the ease of operation is needed, we use the database to keep a tab whether the data is being updated in the table and inspect for updates when the user posts any information.

#### Technology Stack:

PHP

HTML

JavaScript

CSS

MySQL

Apache SSL

Memcache

#### **Description:**

##### **Register Tab:**

This page lets a new User register to the Stock Application by providing their Name, Username, Email, Address and Phone number.

Once the user is registered, he is granted with 10000 Stock amount balance.

**LOGIN/LOGOUT tab:** The Login functionality is being implement with the help of HTTP GET request and response. The query is checked from the database to authenticate the user to the website and logout to make the user redirect to the home page of the website.

**User Profile Information tab:** This functionality is helpful for user to edit his profile information and display the information that has being entered by him on the website. It also lets the User to Add/Delete Bank accounts and also transfer money from and to his bank account.

**Forgot Password:** The tab under the login information is helpful when a user forgets his/her password this tab redirect him to a different page where depending upon the answer to the given question the ability to reset his/her password is activated.

**Portfolio Tab:** This tab displays all the stocks owned by the User in a tabular form. We have implemented this table with 4 columns which are Stock name, Current Price, Bought Price and % change in price for the user to view.

**Search Stocks Tab:** This tab allows the user to search for the current price for the stock of his interest by inputing the Ticker symbol of the stock.

There is also an option for the user to view the historical data for a particular stock based on the frequency and dates he has selected. The frequency here being daily/monthly/yearly.

## **Trade Tab:**

**Ability to Sell:** The ability to sell stocks the user already owns; he can sell it at the price at one time or schedule the date for periodic regular selling of stocks.

**Ability to Add/Delete items in cart:** The ability to delete or add stocks that the user has decided to buy or sell. This will be shown in a tabular manner.

**Ability to Buy:** The user has been granted the ability to buy stocks of his interest. He can either buy them at that point or schedule a time for recurring buy.

**Sorting:** The table used to display the stocks owned by user is in the sortable format where it can be sorted in column format or search the item in the list by specifying the name of the item he is looking for.

**Page not found:** Any page when not available, user is redirected to an error 404 page.