Edinburgh Napier
UNIVERSITY

Enterprise Computing

Edinburgh Napier University – Module Title (SET11109 2019-0 TR2 001)
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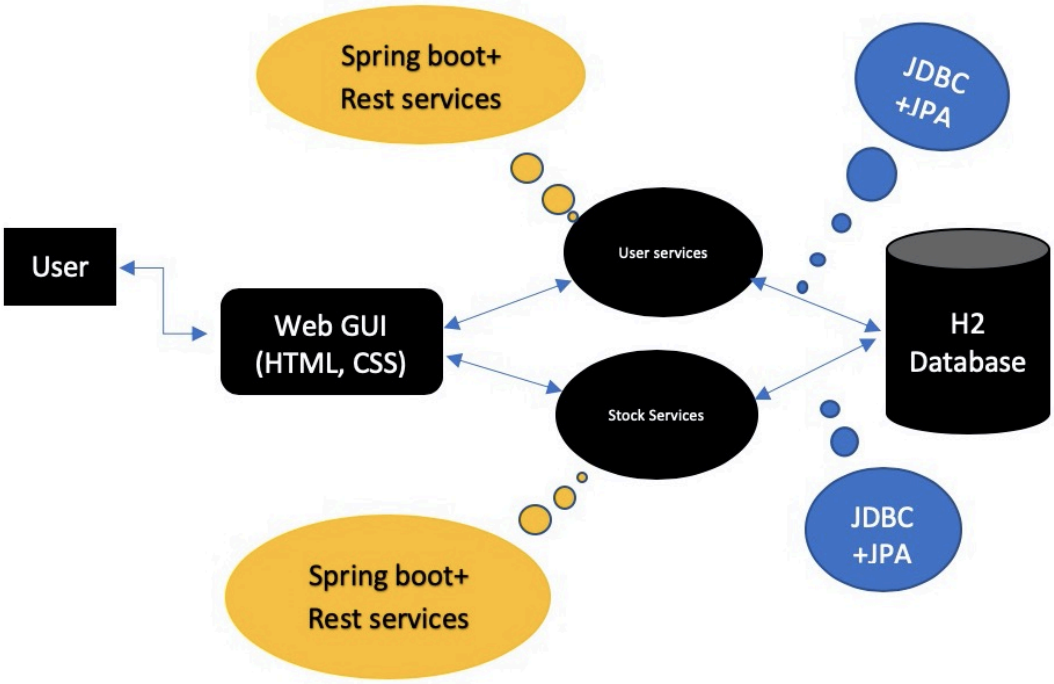
Introduction

- Definition: The term web application refers to a software system that provides a user interface through a web browser. With help of some backend software services.
- I’ve designed an application using Component-Based Development Methodology where you can reuse the most of my application components

Architectural Design



Components

Rest Services

(Buy, Sell, Quote, Portfolio like buttons using REST)

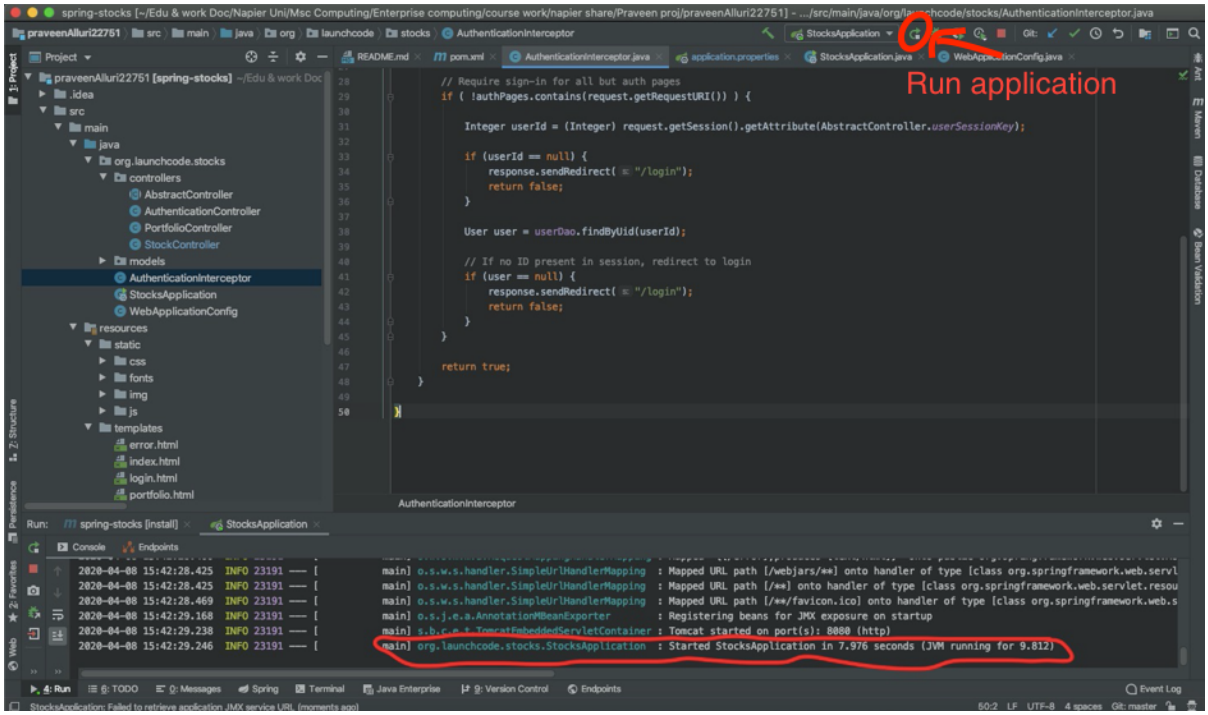
Stock Services (user services)

Analyzing each Component

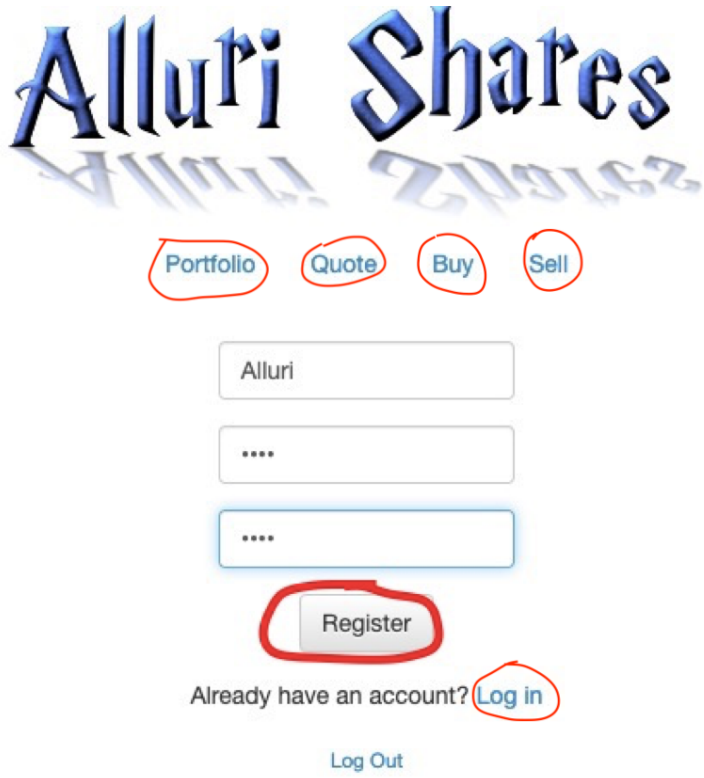
- Rest services : REST is a way to access resources which lie in a particular environment. If a client, say a web browser needs any of these resources, it has to send a request to the server to access these resources. I've used Springboot application to build this REST services
- BUY, SELL, Quote. Etc these button like functionality at UI will work with help of REST services.
- User Services: All user logins and register related services
- Stock services: All transactions related for Sell, Buy services will be taken care of
- Note : All these are reusable services at any application similar to this project architecture by this you can achieve Component-Based Development Methodology

Screenshots of related Application & Database functionalities

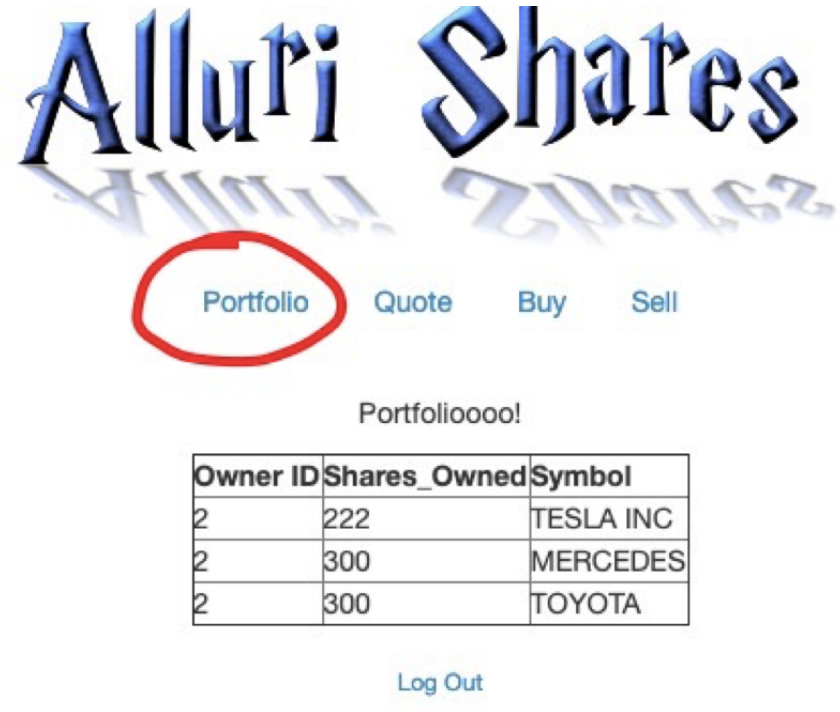
- Open your code base and run the application



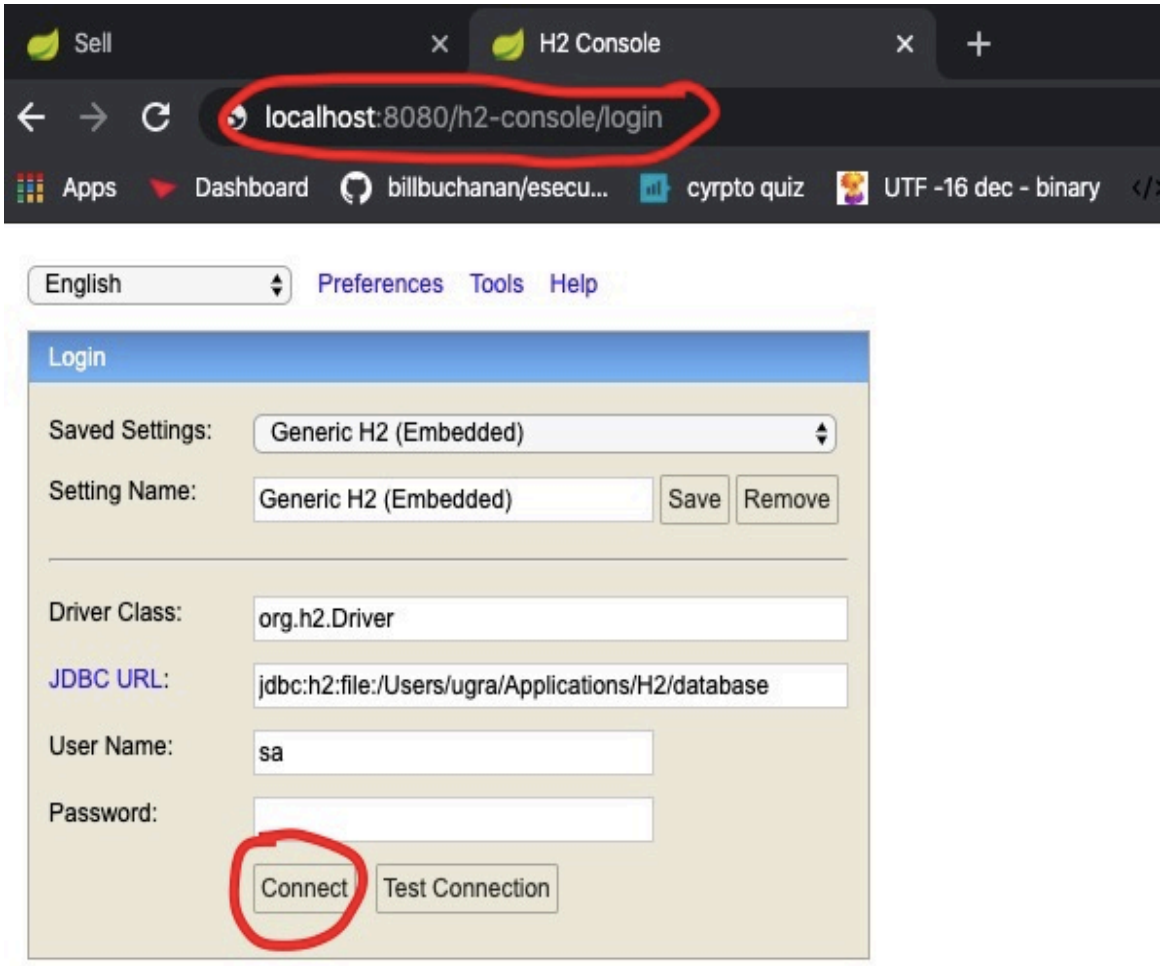
- Once it's up, access the UI using below URL
  URL: http://localhost:8080/login



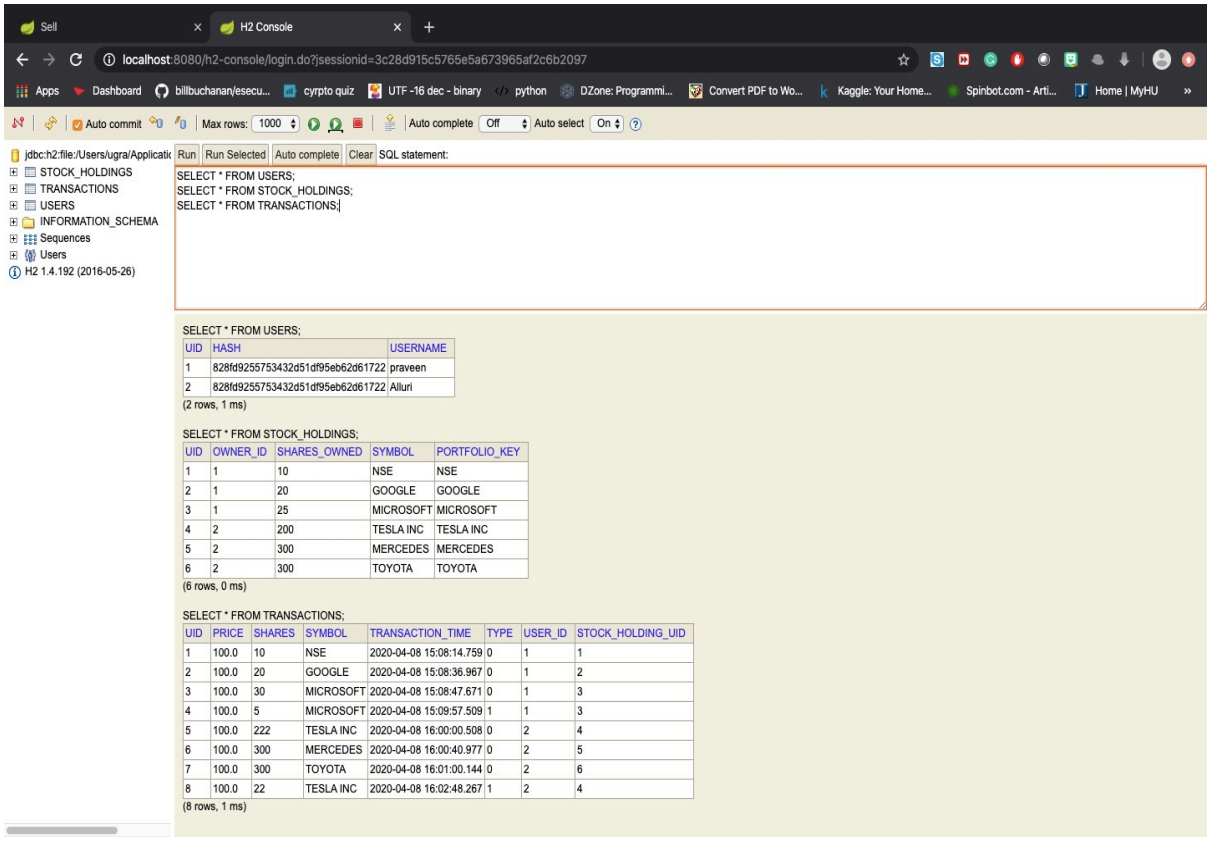
- Use the register button to register for a new user
- Username →password →confirm password
- For existing users use login button
- After successful login. use the respective options for trading/purchasing the shares



- You can see all your shares related information will be available under portfolio tab.
- Coming to database functionality we are using H2 database service for this project
- For accessing the database, please use below URL
- H2 Database URL*:* http://localhost:8080/h2-console/login



- Provide the JDBC path where you defined the local H2 database
- The JDBC path should be the same as **application.properties** jdbc path
- Also mention username and password if required
- **JDBC**: Java Database Connectivity is an application programming interface for the programming language Java, which defines how a client may access a database



- Now you are able access the functionalities of h2 database
- please run below commands to see the output data of above tables
- SELECT*FROM USERS
- SELECT*FROM STOCK_HOLDINGS
- SELECT*FROM TRANSACTIONS
- Now you can see all shares, users, transaction information

Conclusion

I have designed a basic share trader software desktop application. By using component-based development methodology. Have tried to adopt MSOA but unsuccessful. This software system also reusable for similar kind application requirements