Software Engineering Project(CSE300)

Presentation Document

Trading Web Application

Group No. 2

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Introduction :

1. INTRODUCTION

- **Purpose**

  There are four intentions on the following.

  1. All the software system requirements will be realized in the system design.

  2. The development of the system architecture.

  3. Let the system adapt the environment and improve its performance

  4. Divide the system structure to modules and functions.

- **Scope**

  The following tips will show its scope.

  1.It must give users convenient and effective ways to deal with stocks.

  2.Friendly interfaces are also necessary in this project.

  3.It can’t visit the database directly for it is only a Client End.

Selection of Methodology

- Agile vs Linear

- Why Scrum and not other frameworks :

  - XP

  - FDD

  - Kanban & Lean

  - DSDM

- Scrum Roles

  - Product Owner: Kevin Kukadiya

  - Scrum Master: Mihir Kanjaria

  - Review Team: All other members

- Definition of Done :

Initial DoD	Mature DoD	Stringent DoD
assumptions of user are met	All business functionality & acceptance met	All business functionality & acceptance met
feature tested against acceptance criteria	No dependencies	No dependencies
All acceptance criteria met	No errors on the coding standard	No build failures
No known defects	Test case Passed	Integration passed
Documentation Completed	No known defects	No errors in coding standards
Peer code reviewed	Peer code review passed	Documentation Completed
	Documentation Completed	Peer code reviewed & passed
	Technical debts < 2days	No known defects
		Technical debts < 2days
		Test case passed

Software's Overall Functionalities are as follows:

1. **Login the System:**

Function name	Login the system	
User's input	Username	Password
General output	Success (Function interface)	Failed(Error Dialog Box)

2. **Register for the System:**

Function name	Register for the system				
User's input	Username and Password	First name, Middle name, Last name	Gende, Phone No.	email-id, Pan number, city	Bank name, Bank Account No.
General output	Success		Failed		

3. **Buy Stocks:**

Function name	Buy stocks			
User's input	Stock number (stock name)	Quantity	Capital account	Capital Password
General output	Success(owned stocks and capital change)			Failed(Error Dialog Box)

4. **Sell Stocks:**

Function name	Sell stocks			
User's input	Stock number (stock name)	Quantity	Capital account	Capital Password
General output	Success(owned stocks and capital change)			Failed(Error Dialog Box)

5. Change Password:

Function name	Change Password	
User's input	Enter new password	Re-enter new password
General output	Success	Failed(Error Dialog Box)

6. View Stock Information:

Function name	View Stock Information	
User's input	Click on Orders	Click on Portfolio
General output	Success	Failed(Error Dialog Box)

7. Buy Order:

Function name	Buy Order	
User's input	Click on New Order	
General output	Success	Failed(Error Dialog Box)

8. Sell Order:

Function name	Sell Order	
User's input	Click on Portfolio and then click on button sell this stock	
General output	Success	Failed(Error Dialog Box)

9. See Watchlist:

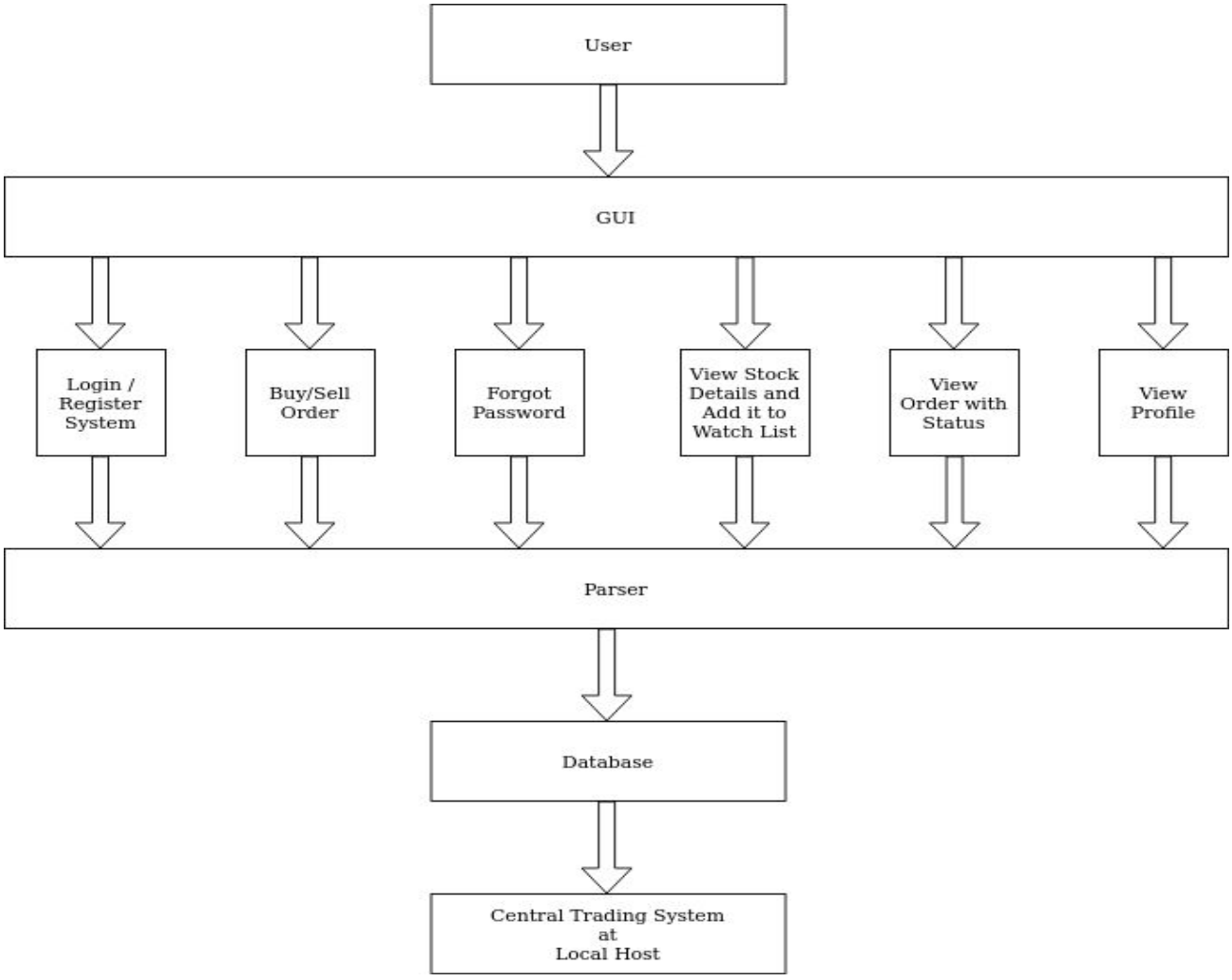
Function name	See WatchList	
User's input	Add symbol	
General output	Success	Failed(Error Dialog Box)

10. Logout:

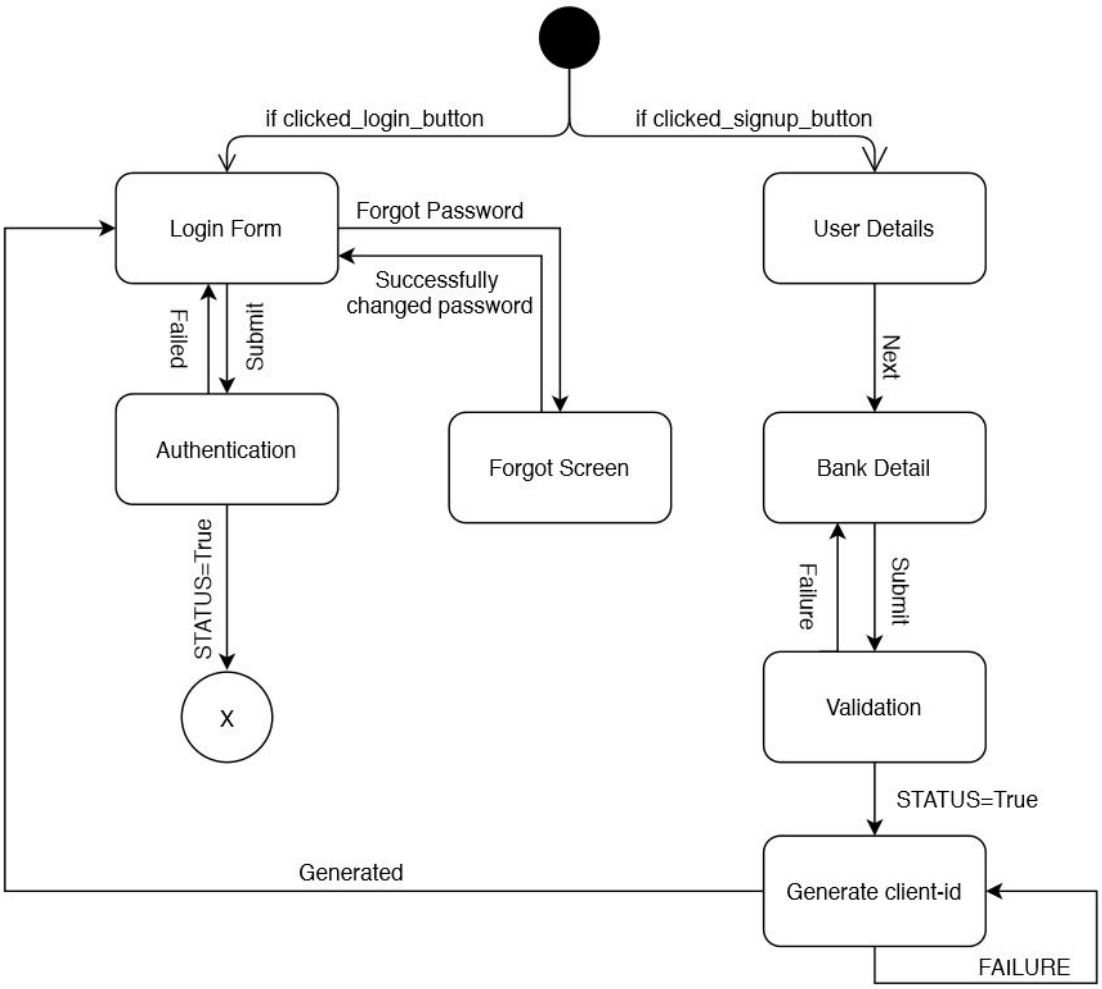
Function name	Log Out	
User's input	Click on profile and then click on log out	
General output	Success	Failed(Error Dialog Box)

Architectural Style:

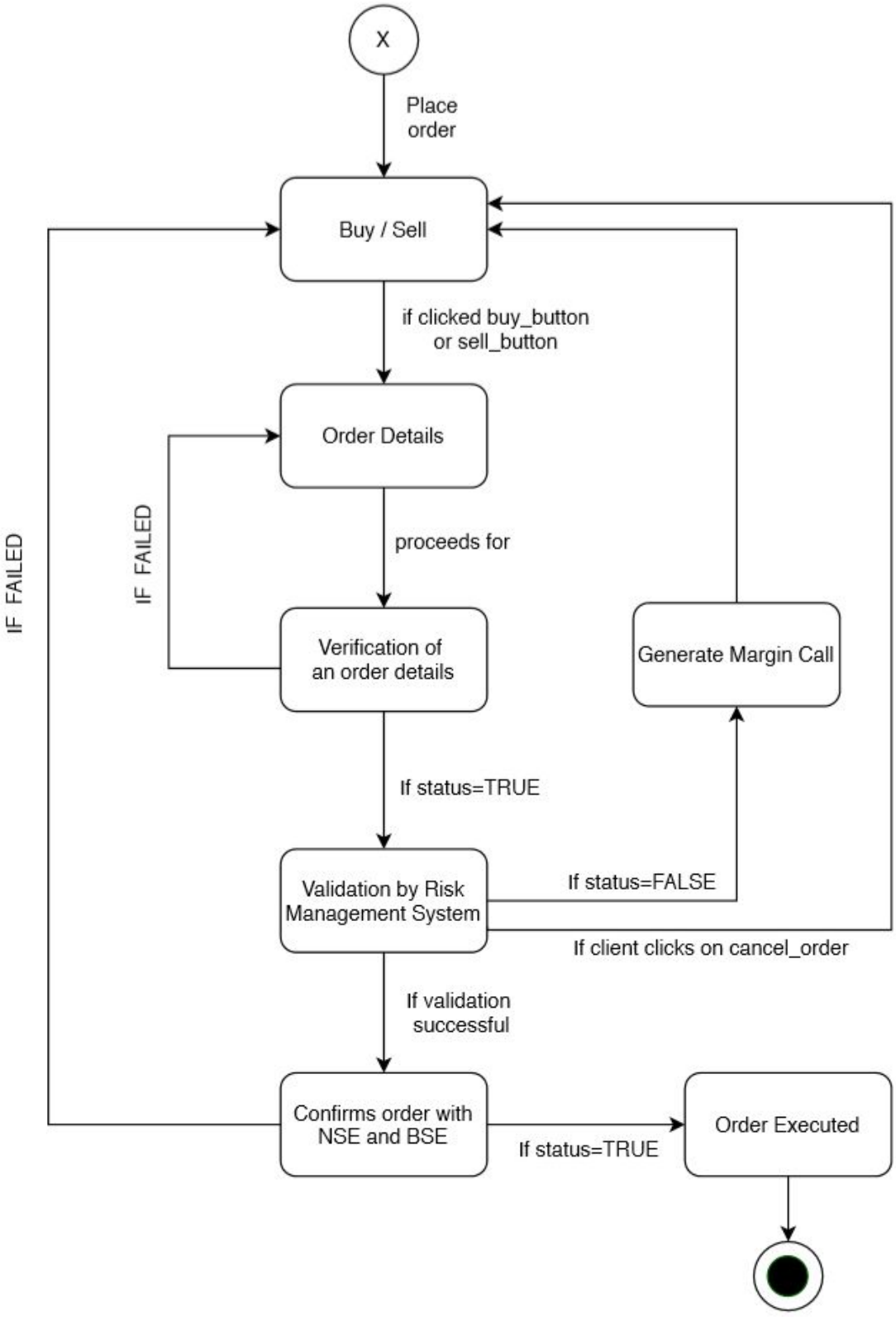
Layered Architecture.



State Diagram



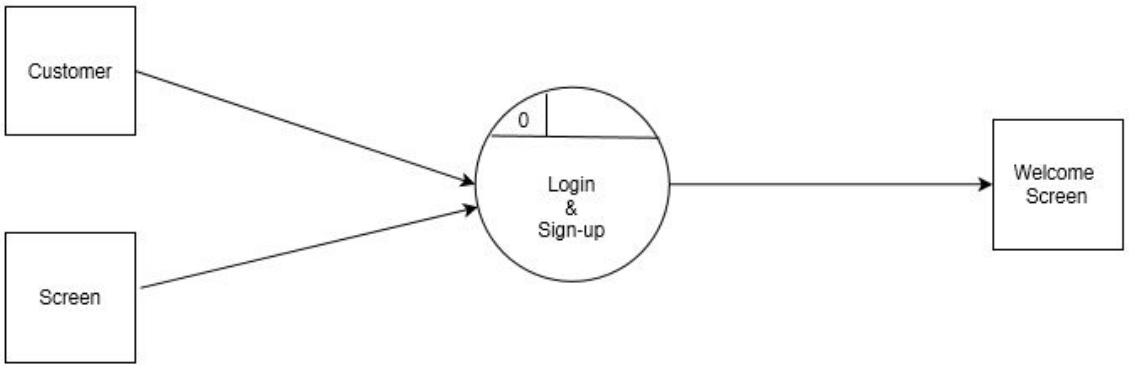
Phase-2 : Order Placing and execution



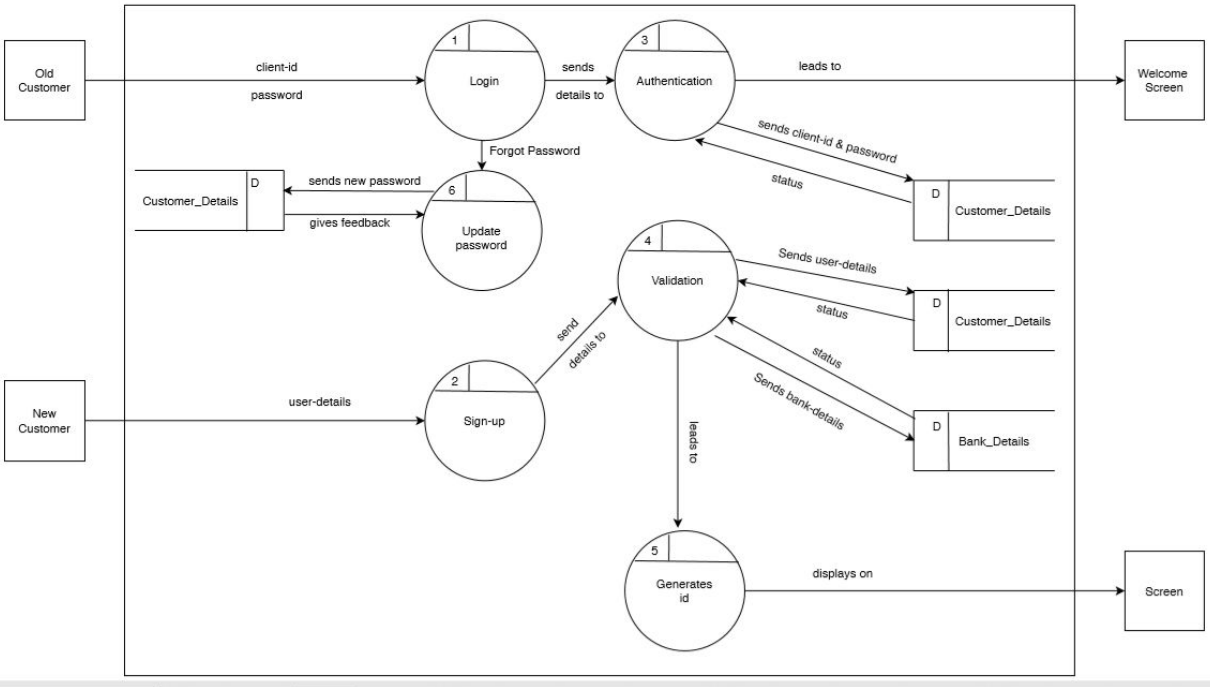
Data Flow Diagram

Phase-1 : Login/Sign-up System

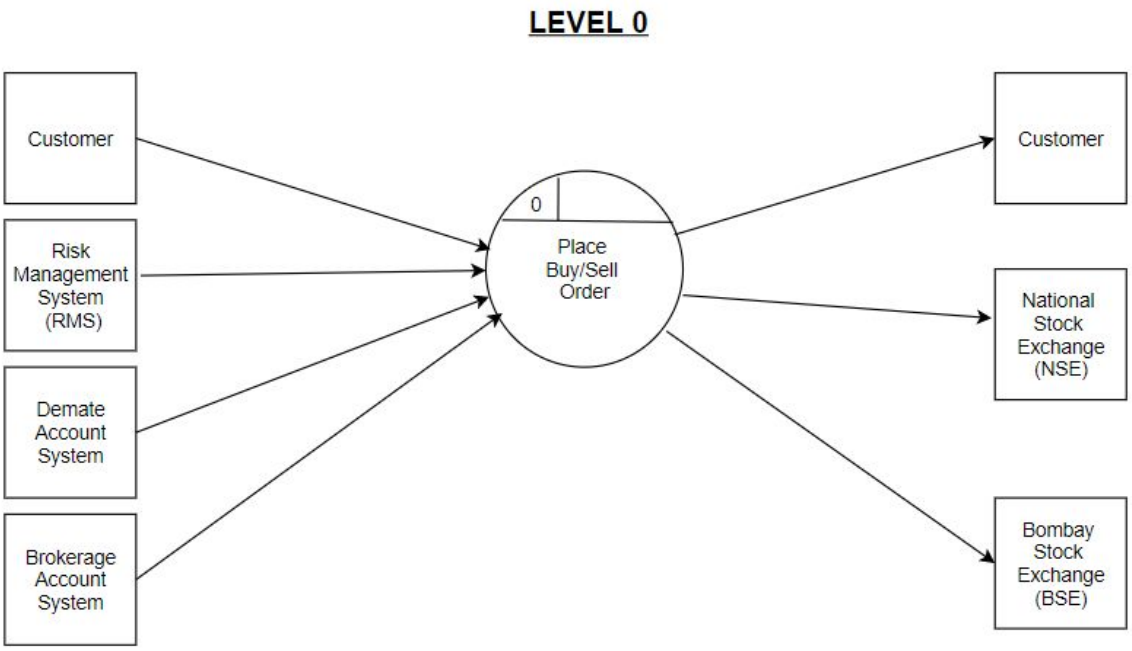
LEVEL 0



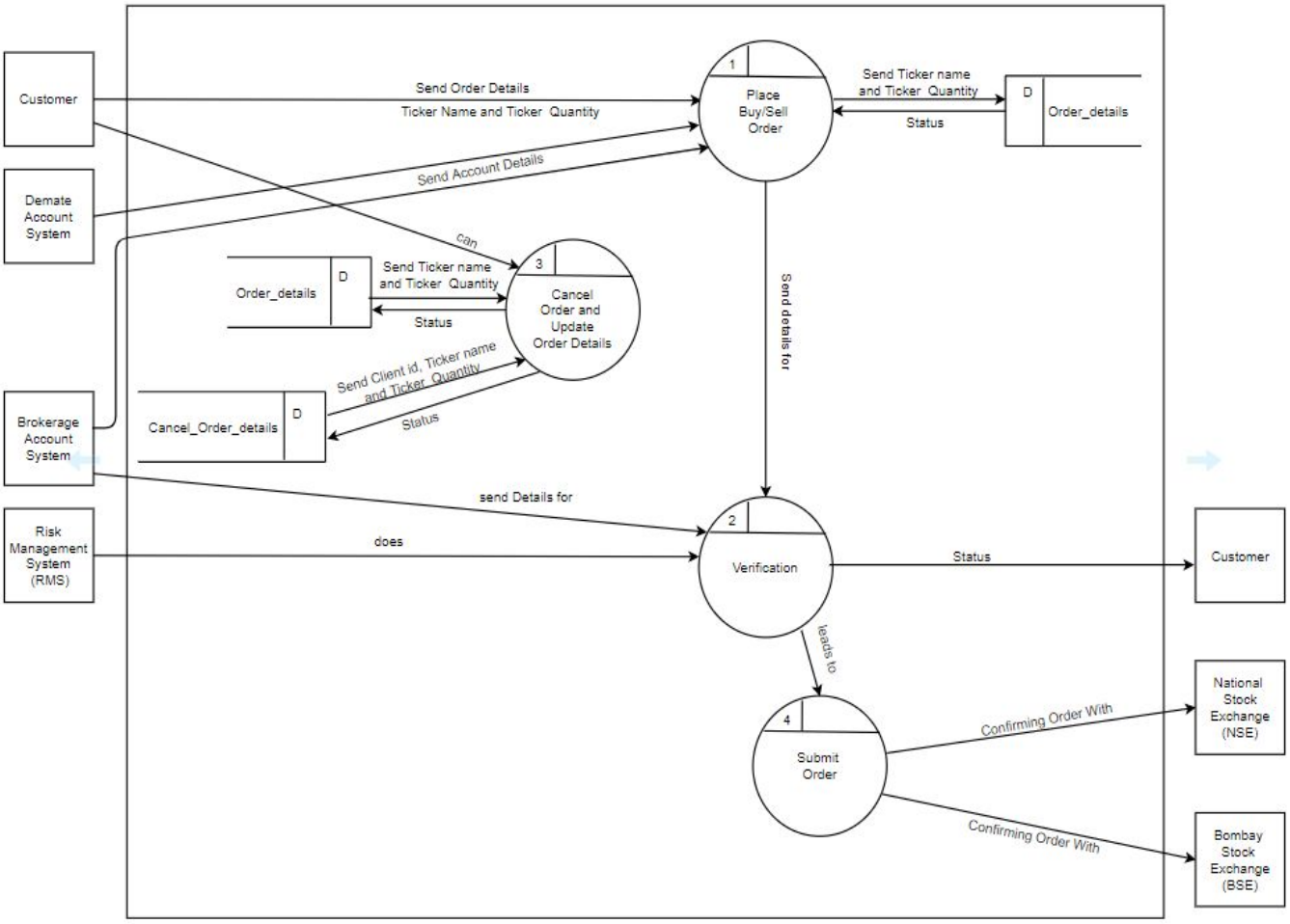
LEVEL 1



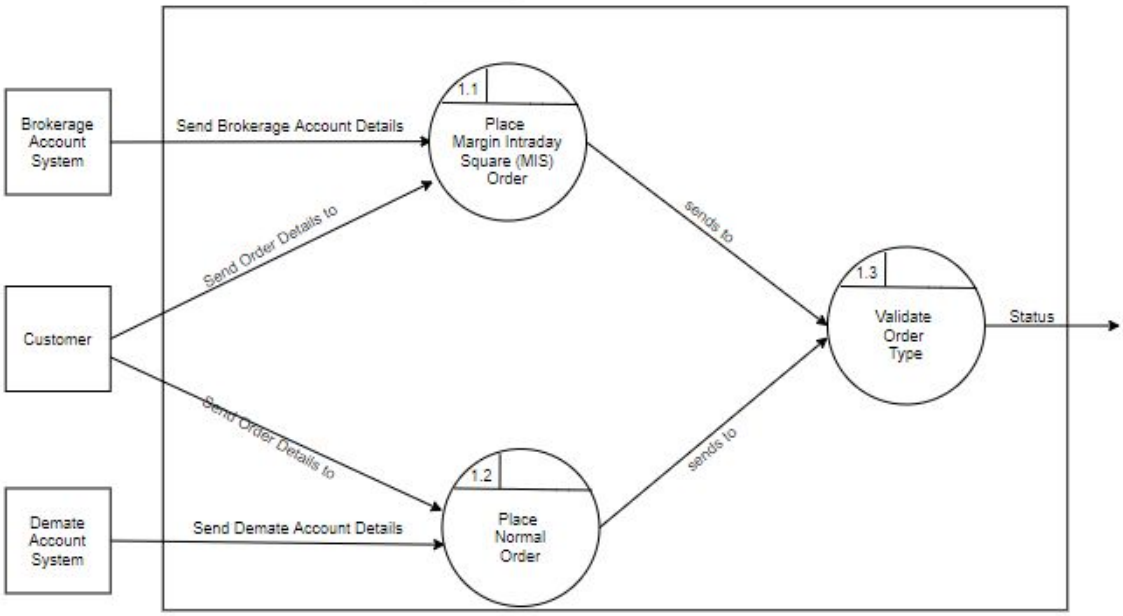
DFD Phase 2:

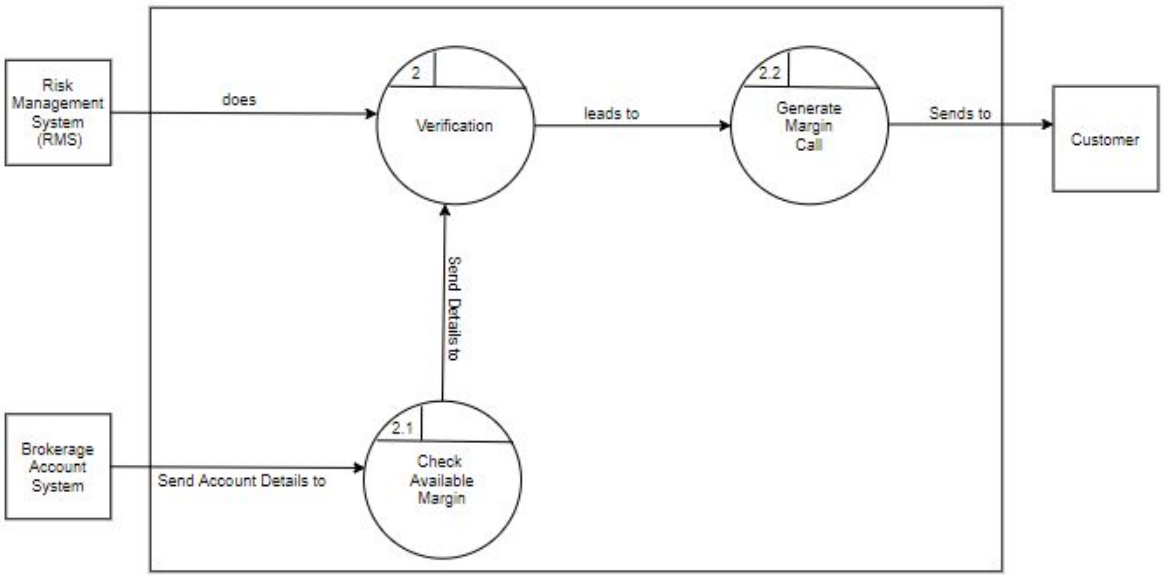

LEVEL 0
Customer
Risk Management System (RMS)
Demate Account System
Brokerage Account System
0
Place Buy/Sell Order
Customer
National Stock Exchange (NSE)
Bombay Stock Exchange (BSE)

LEVEL 1


Customer
Demate Account System
Brokerage Account System
Risk Management System (RMS)
Send Order Details
Ticker Name and Ticker Quantity
Send Account Details
1
Place Buy/Sell Order
Send Ticker name and Ticker Quantity
Status
D
Order_details
Send details for
can
3
Cancel Order and Update Order Details
Order_details
D
Send Ticker name and Ticker Quantity
Status
Send Client id, Ticker name and Ticker Quantity
Status
Cancel_Order_details
D
send Details for
does
2
Verification
Status
Customer
leads to
4
Submit Order
Confirming Order With
National Stock Exchange (NSE)
Confirming Order With
Bombay Stock Exchange (BSE)

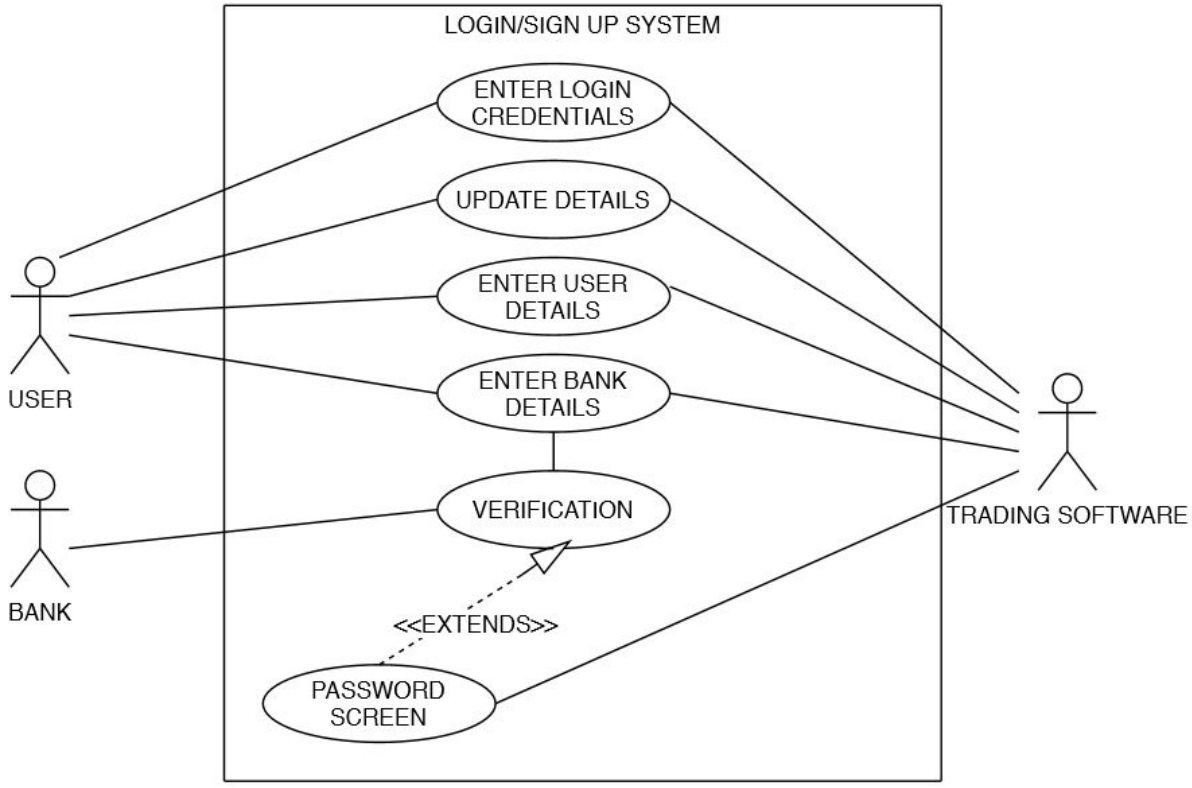
LEVEL 2


Brokerage Account System
Send Brokerage Account Details
1.1
Place Margin Intraday Square (MIS) Order
Send Order Details to
sends to
Customer
1.3
Validate Order Type
Status
Send Order Details to
1.2
Place Normal Order
sends to
Demate Account System
Send Demate Account Details

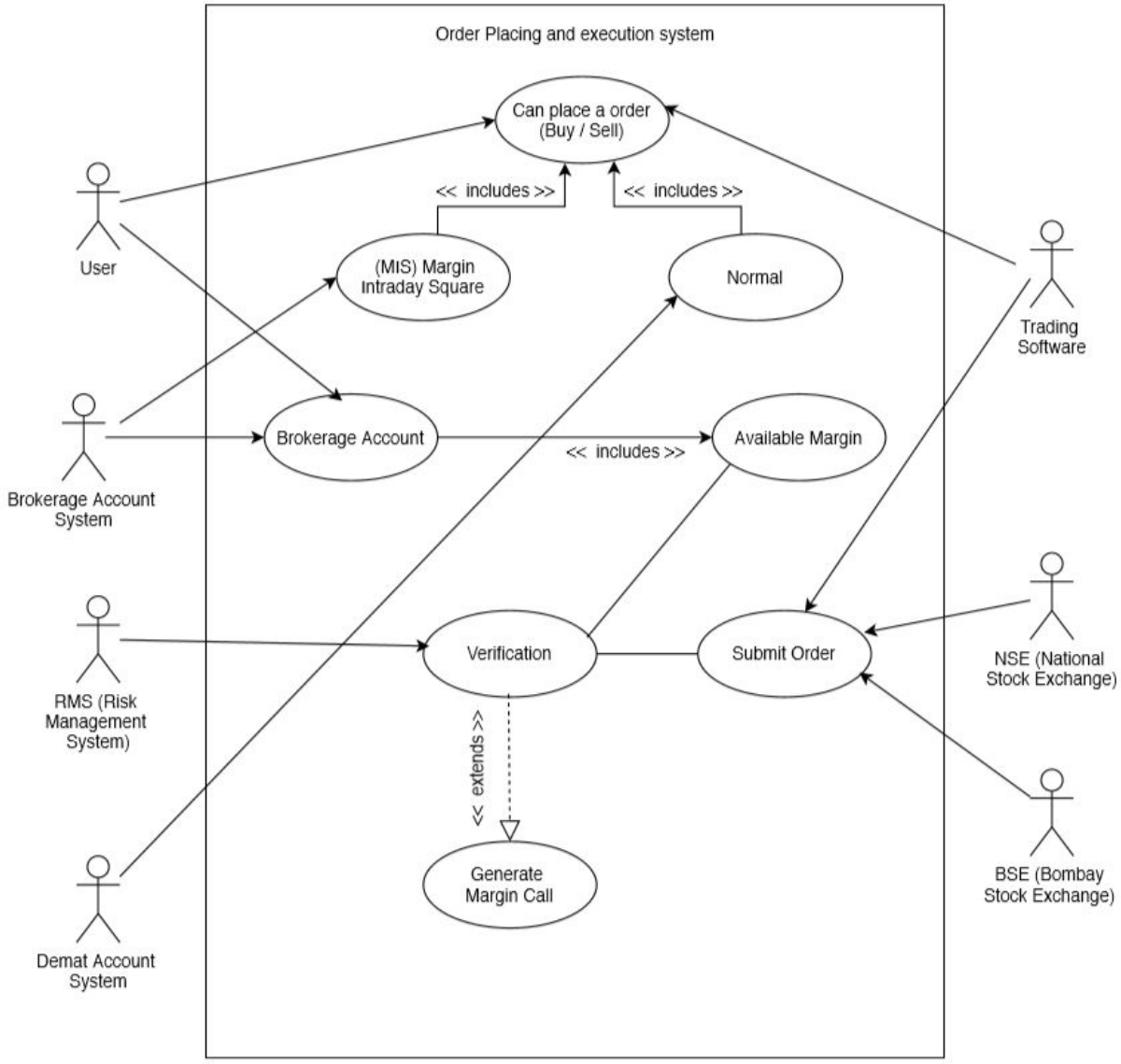

Risk Management System (RMS)
does
2
Verification
leads to
2.2
Generate Margin Call
Sends to
Customer
Send Details to
Brokerage Account System
Send Account Details to
2.1
Check Available Margin

Use Case:

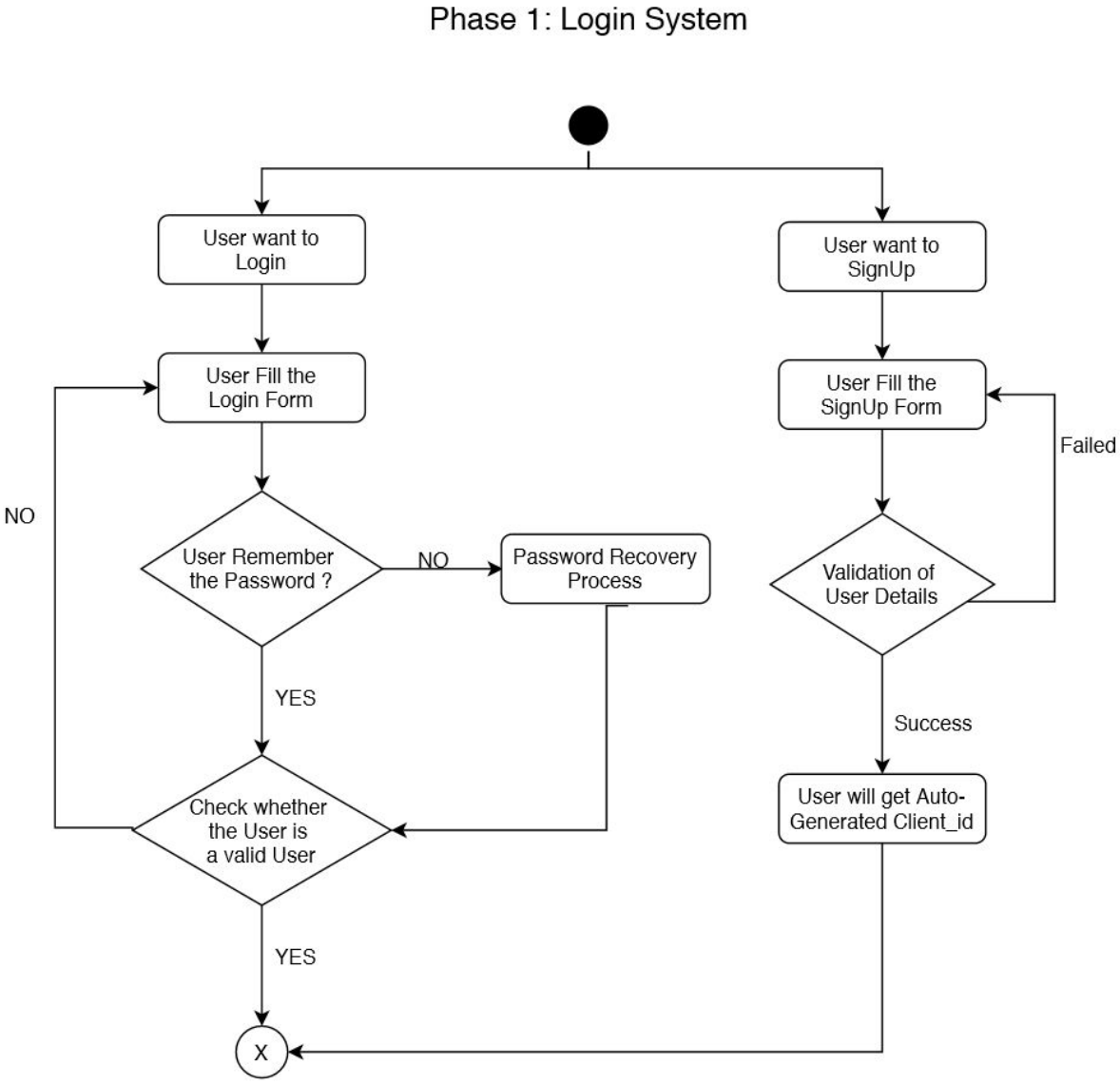
Phase 1: Login/Sign-up System



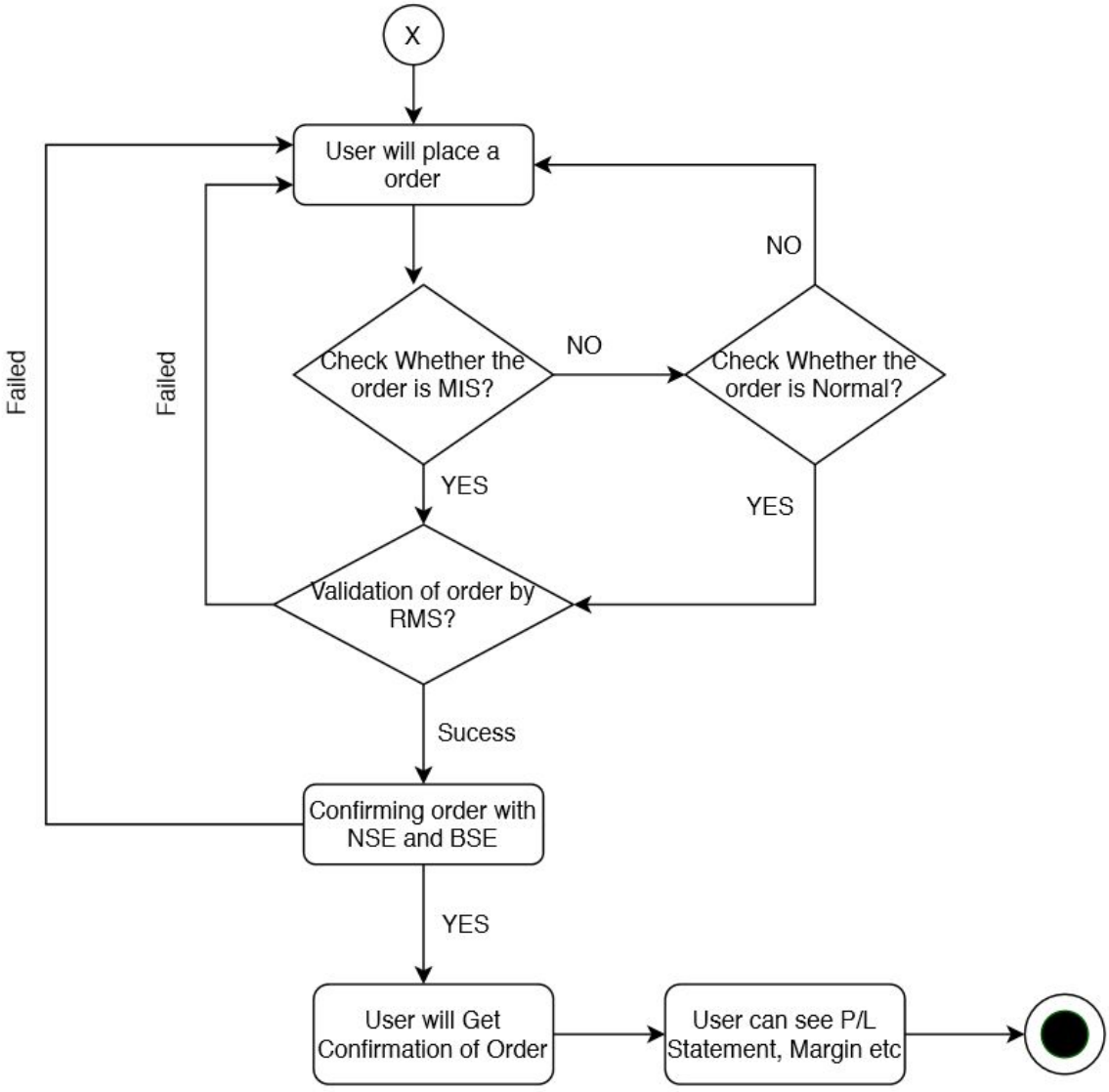
Phase-2 : Order Placing and execution



Activity Diagram



Phase 2: Order Placing and execution



Database :-

Testing Process :-

- Testing of fundamental feature is done every time whenever any changes or new functionality is incorporated. Fundamental features like sell and buy logic. So Testing Fundamental feature is on the top of our priority then secondary testing features (Market Watch, forgot password, CSS.

- Input and Output of Testing process is mentioned in detailed in the test case document. All cases are considered i.e all scenario is considered.

- Testing is done by keeping flow of user process in the mind and tested step by step. Testing is divided into two parts.

1) Manual Testing

2) Automation Testing

In Manual Testing we as a user input all test data and done the testing. We manually start the events of market. After inputting the test data we observe the results and compared it with the expected results. And analyse the error or problem if we have any.

In Automation Testing we as user just run the code which was written in python. The code will automatically start the browser and go to the login page of our web application. Enter the specified the login credential in the code. Do the login and go into the order window and place the order. Similarly with registration process and forgot password. In this whole process after performing a action statistics is maintained like amount of time required to load the web element. Front end time to get loaded and back end time to complete the response. Using the automation testing we have benefit of finding the exact timing unlike the manual testing.

Backend Login : approx 700-720 millisecond
Frontend login : approx 2.5-3 second (when you open it for the first time it takes only 1.5 second but after opening more tabs, average becomes 2.5-3 second)
Login Username textbox : less than 0.9 second
Login password textbox : less than 0.9 second
Login submit button : less than 0.9 second

Backend dashboard millisecond : approx 25 millisecond (Because login phase loads the component of dashboard)
Frontend dashboard millisecond : 1.5-2.5 second
Backend order tab millisecond : approx 25 millisecond (Because login phase loads the component of dashboard)
Frontend order tab millisecond : 1.5-2.5 second

after filling the details
Backend order placed millisecond : 7 millisecond (Because login phase loads the component of dashboard)
Frontend order placed millisecond : 50-60 millisecond

coding standard

understanding of code to software engineer for project management and also for organization

indentation
inline comments
structure programing
function size and name
source file names
variable name
use braces

conclusion

implemented all basic requirements and all basic features
Not started the scrum cycle of advanced features. we declare no conflict of interests among the group members.