

Software Requirements Specification

for

Mess Management

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version
Added UML Diagrams	31/2/18	Had not previously added UML Diagrams	1.1
Updated SRS	13/3/18	Could not implement completely some features	1.2

1. Introduction

1.1 Purpose

The purpose of this document is to present a detailed description of the Mess Management System. It will explain the purpose and features of the system, the interfaces, what the system will do, the constraints under which it must operate, its requirements and what kind of system interactions take place.

1.2 Document Conventions

Bold faced text has been used to emphasize section and subsection headings.

1.3 Intended Audience and Reading Suggestions

This document is to be read by the development team, the project managers, marketing staff, testers and documentation writers. The SRS has been organized approximately in order of increasing specificity. The developers and project managers need to become intimately familiar with the SRS.

Others involved need to review the document as such:

Overall Description: Marketing staff have to become accustomed to the various product features in order to effectively advertise the product.

System features: Testers need an understanding of the system features to develop meaningful test cases and give useful feedback to the developers.

External Interface Requirements: The hardware developers need to know the requirements of the device they need to build. The marketing staff also needs to understand the external interface requirements to sell the product by describing the user friendly features of the nTravel.

Non-functional and Functional Requirements: The hardware developers.

1.4 Product Scope

The mess management software eases the interaction between the student and the mess administration and provides a pathway for communication between both. This software can prove comfortable for the students by making placing of orders at NC easier and also help managing the orders much easier for the mess administration. This software will prove beneficial for both the mess administration as well as the students who are going to be the users of this.

1.5 References

IEEE. IEEE Std. 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

2. Overall Description

2.1 Product Perspective

This software is used as an application to ease the communication between the mess administration and the students and bridge the gap between the two. There are two softwares, one for the students to access and the other for the mess administration to handle and both of them are linked together by a common relational database. Currently there are no softwares which link the students and the mess administration and this software hence acts as a new prototype for the aforementioned purpose.

2.2 Product Functions

The mess management software contains the following functions:

1. Allows the students to login to the student software.
2. He can choose the mess option he wants from the list of available messes.
3. The student can provide feedback for the mess food.
4. He can change the password if he wishes to do so.
5. He can view the NC menu and can place orders.
6. He can check the status of his orders.
7. He can logout from the system after he is done performing these actions.
8. The software allows the mess administration to login.
9. The mess administration can check the various feedbacks that were provided by the students for their respective orders.
10. He can update the NC menu.
11. The mess admin can process the order of the students and can change the status.
12. The mess administration should be able to logout of the system once they are done performing their action.

2.3 User Classes and Characteristics

The Mess Management System has two active actors and one relational database.

Students: The Students use a web portal to which they can login with their ID and password and avail all the facilities available. They can login and chose the monthly mess option, place orders for NC online, book the mess for special occasions, view the daily mess menu and the night canteen

(NC) menu, view statistics, inform the mess authorities when he/she won't be eating in the mess and submit feedback regarding the food.

Mess admin: The Mess Admin has access to SRS- A different interface on his/her end, with a login and password. he can edit the daily mess menu, upload statistics and view net profit, view orders for the night mess and approve any special lunch orders and reading of feedback.

Database: A relational database is used to store all the data such as feedback, consumption statistics, list of registered students, menus with items and prices, etc.

2.4 Operating Environment

The software will operate with the following software components and applications:

The software being developed will be running with Java and the server running with the tomcat application which is used to view JSP pages.

The software is programmed to run on any OS given that it has a running version of Java and Tomcat webserver.

2.5 Design and Implementation Constraints

The JAR file has to be attached before the database is connected.

2.6 User Documentation

For user documentation and information, please consult section 4: External Interface Requirements and attached user manual.

2.7 Assumptions and Dependencies

A single student doesn't place more than one order at a time.

3. External Interface Requirements

3.1 User Interfaces

The Interface will be in the form of a webapp. It is designed to be functional and minimal in its styling. All options will be displayed in a menu based format. HTML and CSS will be used to setup the page layout and add minimal styling to make the interface user friendly.

3.2 Hardware Interfaces

Web server will be required so that the students and the mess admin can connect to it to exchange information. The server have a database to store all the data entries. The Server will have to have a high speed internet connection to the college's local network.

3.3 Software Interfaces

The server will be hosted using Apache Tomcat Web server. It will also have a MySQL relational database. The main backend processing will be done using Java Server Pages (JSP) including connecting to and accessing the database and processing requests.

3.4 Communications Interfaces

The main communication protocol will be Hyper Text Transfer Protocol (HTTP). This will be used to transfer information back and forth from the client to the server. HTTP GET and POST will be used to send the information.

4. System Features

4.1 Student Login

4.1.1 Description and Priority

This is used by the student to login to the software. The student has to enter his login details in the login page.

This requirement is high priority.

4.1.2 Stimulus/Response Sequences

Once the student enters the login details, the login details are verified with the details present in the database and if the login credentials are correct the user is logged in and taken to his account page.

4.1.3 Functional Requirements

REQ-1: The student shall navigate to the login page

REQ-2: The student has to enter the username and password.

REQ-3: The login credentials have to be verified with that present in the database.

4.2 Choose Mess Option

4.2.1 Description and Priority

The student is allowed to login and choose the mess that he desires. Priority is high.

4.2.2 Stimulus/Response Sequences

The user has to be logged in and the date has to be valid, because the choosing of mess can happen only on a certain day in a given month. Only if the date is valid, the student can change the mess.

4.2.3 Functional Requirements

REQ-1: The student has to hit the submit button when he is done

REQ-2: The server has to update the database based on the student's choice.

4.3 View Menu

4.3.1 Description and Priority

The student is allowed to view the menu after he logs in. Priority is medium.

4.3.2 Stimulus/Response Sequences

The student gets to see the entire menu when he presses the view menu button on his home screen.

4.3.3 Functional Requirements

REQ-1: The student has to choose the day whose menu he wants to see.

REQ-2: The server has to be connected to the database from where the details of the menu is passed on to the student home screen.

4.4 Change Student Password

4.4.1 Description and Priority

The student is allowed to change his password after he is logged in. Priority is high.

4.4.2 Stimulus/Response Sequences

The password can be changed if the student clicks the change password option on his homescreen and enters correctly his current password.

4.4.3 Functional Requirements

REQ-1: The old password has to be entered correctly by the student.

REQ-2: The server has to be connected with a database where the new password is updated.

4.5 Place NC Order

4.5.1 Description and Priority

The student is allowed to place the NC order after he is logged in. Priority is high.

4.5.2 Stimulus/Response Sequences

He should be allowed to place NC order on the pressing of the NC button.

4.5.3 Functional Requirements

REQ-1: Student has to choose the items that he has to order.

REQ-2: The database has to update the order and change the status in the database.

4.6 Provide Feedback

4.7.1 Description and Priority

This is used to provide feedback for the food. Priority is Medium.

4.7.2 Stimulus/Response Sequences

The student's feedback is submitted after the pressing of the feedback button.

4.7.3 Functional Requirements

REQ-1: Student fills the text for the feedback in the given text box.

4.7 Logout

4.8.1 Description and Priority

The user has to logout from the software after he has used the software. Priority is high.

4.8.2 Stimulus/Response Sequences

The student is logged out on pressing the logout button.

4.8.3 Functional Requirements

REQ-1: After logging out, the student has to be redirected to a login page.

4.8 Mess Admin Login

4.9.1 Description and Priority

This is used for the mess admin to login to the software. Priority is high.

4.9.2 Stimulus/Response Sequences

On pressing the login button, the mess admin is logged in to the system.

4.9.3 Functional Requirements

REQ-1: On entering the username, password, the username and password are verified against the details already present in the system.

REQ-2: If the login credentials are correct, only then is the mess admin allowed to login to the system.

4.9 Change admin password

4.10.1 Description and Priority

This allows the mess admin to change the password after he is logged in. Priority is medium.

4.10.2 Stimulus/Response Sequences

On pressing the change password button, the mess admin gets to change the password.

4.10.3 Functional Requirements

REQ-1: Only after the admin is logged in will he be given the functionality of being able to change the password.

REQ-2: Once the user enters the new password, the system updates it's new password in the database.

4.10 Update Menu

4.11.1 Description and Priority

The mess admin can update the menu through his account page. Priority is high.

4.11.2 Stimulus/Response Sequences

The mess admin can create and delete new items if he wants by pressing the appropriate buttons.

4.11.3 Functional Requirements

REQ-1: The new items that are added to the menu are updated in the database.

4.11 View Feedback

4.13.1 Description and Priority

This is used for the mess admin to view the feedback given by the students. Priority is low.

4.13.2 Stimulus/Response Sequences

On pressing of the view feedback option, the mess admin gets to see all the feedback that have been provided by the students.

4.13.3 Functional Requirements

REQ-1: The admin has to be logged in to the system.

REQ-2: The admin has to be able to mark if he has read the feedback or not and this status is updated in the database.

4.12 Logout

4.14.1 Description and Priority

This is used for the mess admin to log out of the software. Priority is high.

4.14.2 Stimulus/Response Sequences

On pressing the logout button, the mess admin is logged out of the system.

4.14.3 Functional Requirements

REQ-1: The admin after logging out has to be redirected to the login page.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

webserver will be required so that the students and the mess admin can connect to it to exchange information. The server have a database to store all the data entries.

5.2 Safety Requirements

It should not allow multiple people from the same credentials to log in.

5.3 Security Requirements

An automatic logout system will log out a student after 10 minutes.

5.4 Software Quality Attributes

The server will be hosted using Apache Tomcat Webserver (Version 8.0.14). It will also have a MySQL relational database. The main backend processing will be done using Java Server Pages (JSP) including connecting to and accessing the database and processing requests.

5.5 Business Rules

Not yet done as still in requirement phase.

6. Other Requirements

MySQL will be used as the backend database system. Apache tomcat web server is used to host the JSP pages.

Appendix A: Glossary

Term	Definition
Database	Collection of all the information monitored by this system.
Mess Admin	The administrator in charge of the mess - updates the databases, uploads statistics, keeps track of orders, resets the system after every meal, etc.
Software Requirements Specification	A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document.
Student	A student avails the mess facilities.
Menu	A collection of all the food items which are available in the mess.
Order	A collection of food items from the menu that the student wants to buy.
Special Order	A list of meal preferences along with other data such as the date and time of the special lunch. A special order will typically be made for a club/department meeting or for special occasions such as festivals.
NC	Night Canteen (open from 11:15pm to 2:00 am), sells items which are not on the daily mess menu in a pay-and-eat system.

Appendix B: Analysis Models

Water flow model will be used to build the system as the requirements of the system are well known.

In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases.

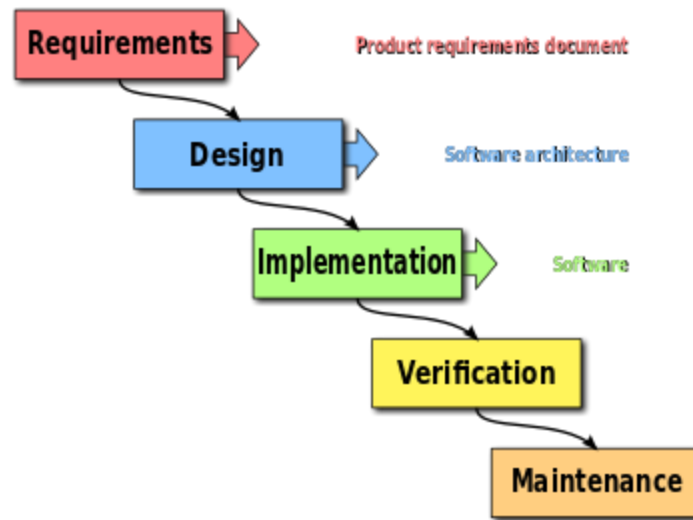
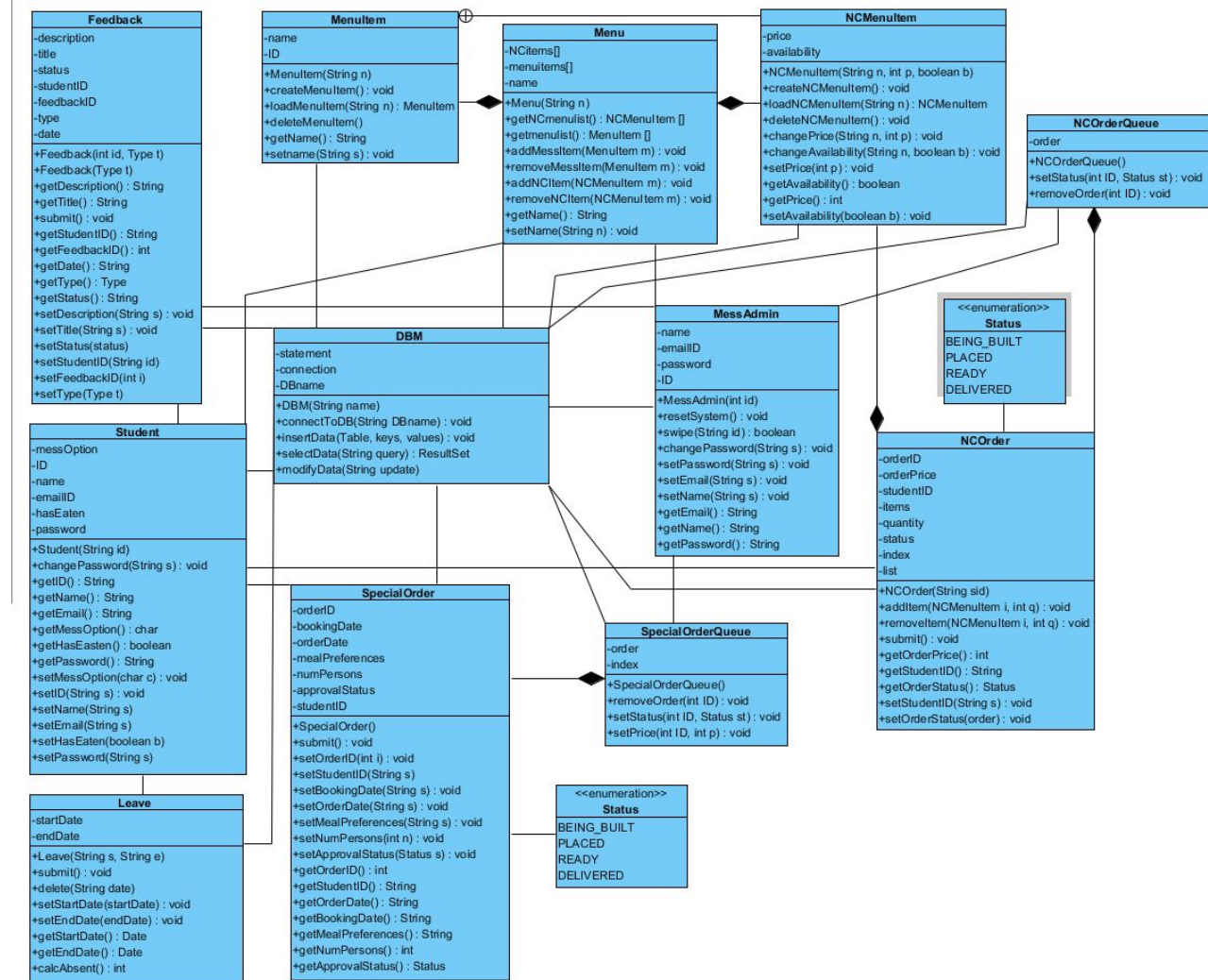


Fig 1 Water flow model

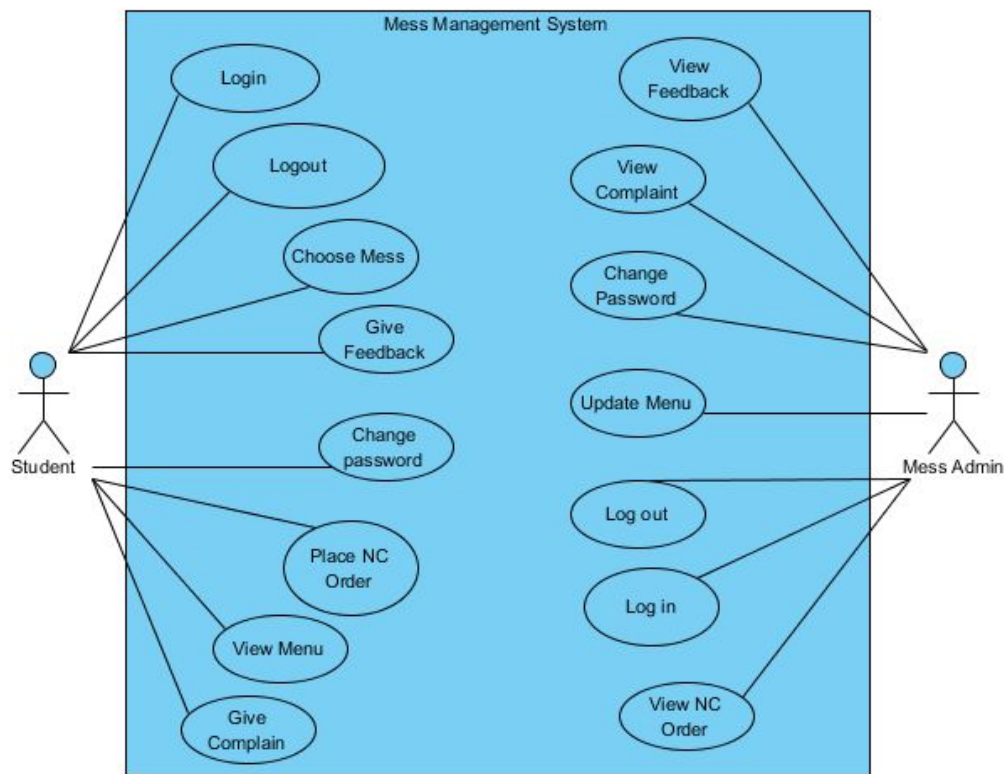
Appendix C: To Be Determined List

Not yet done as still in requirement phase.

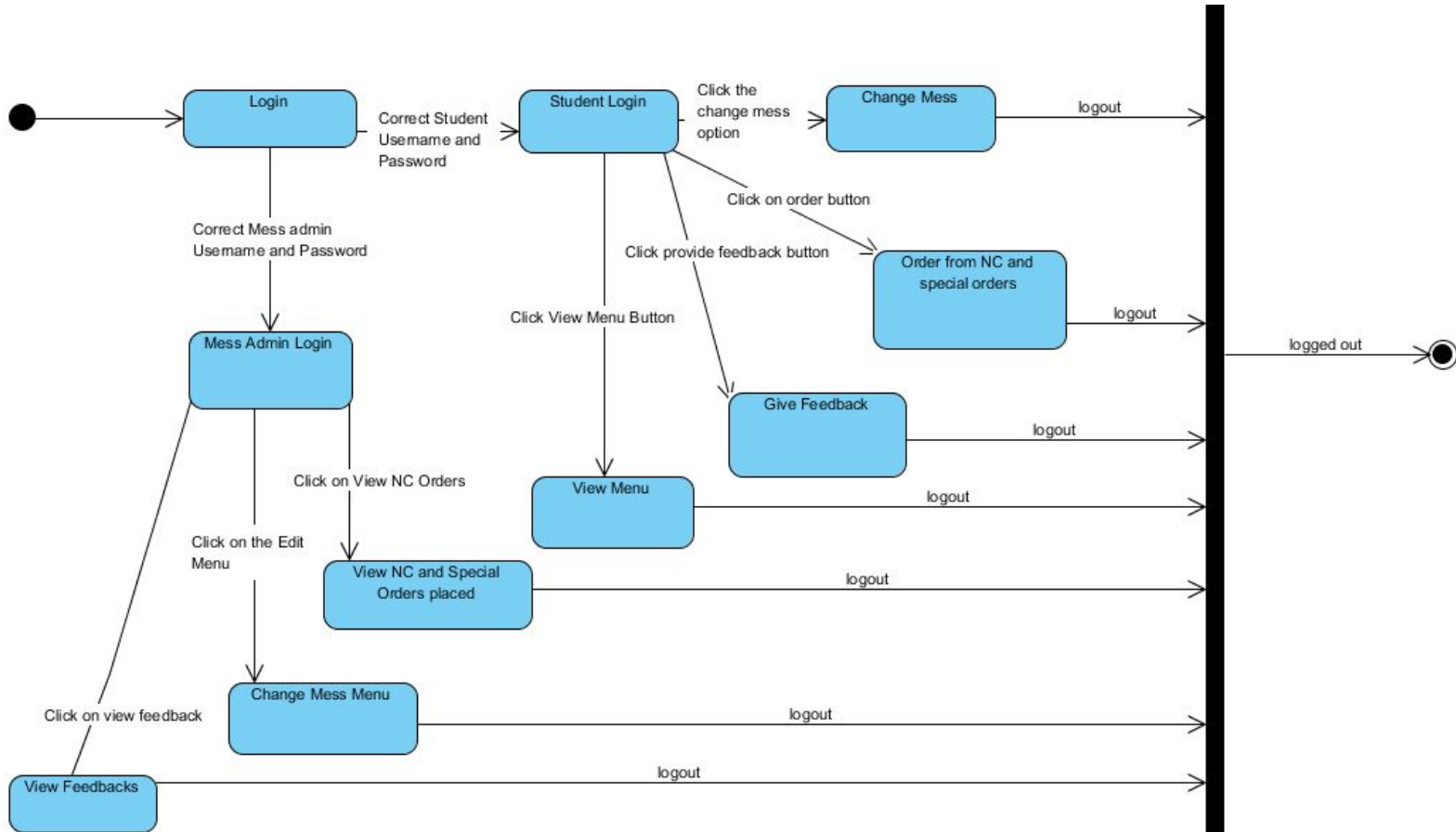
Appendix D



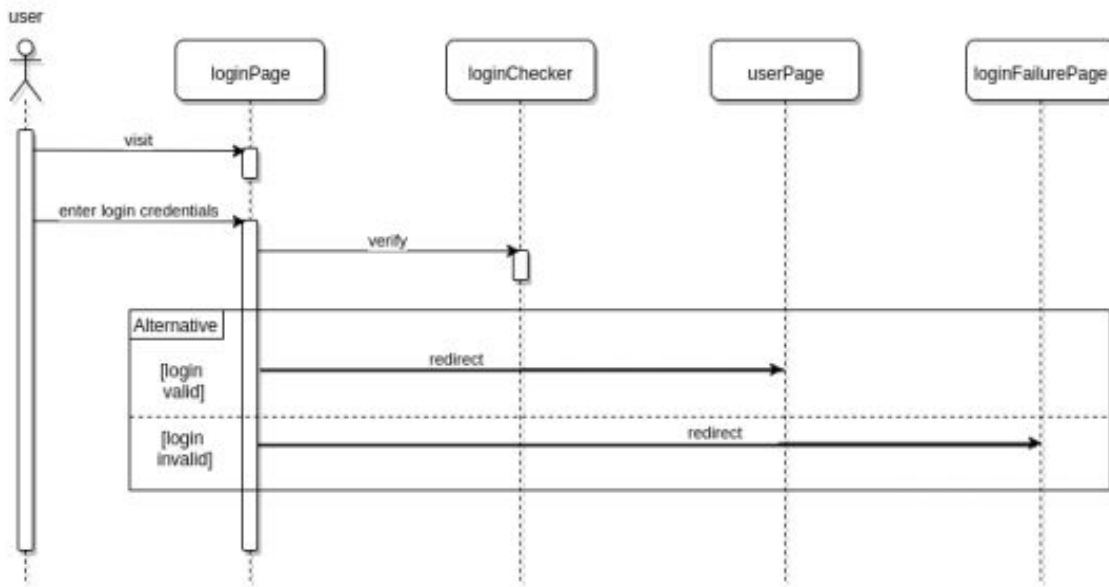
Class diagrams



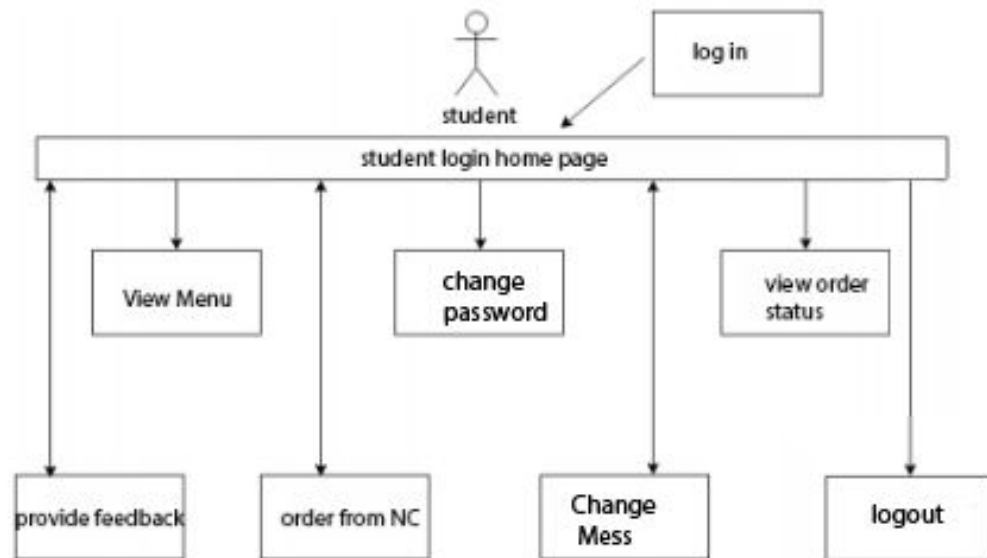
Use case diagrams



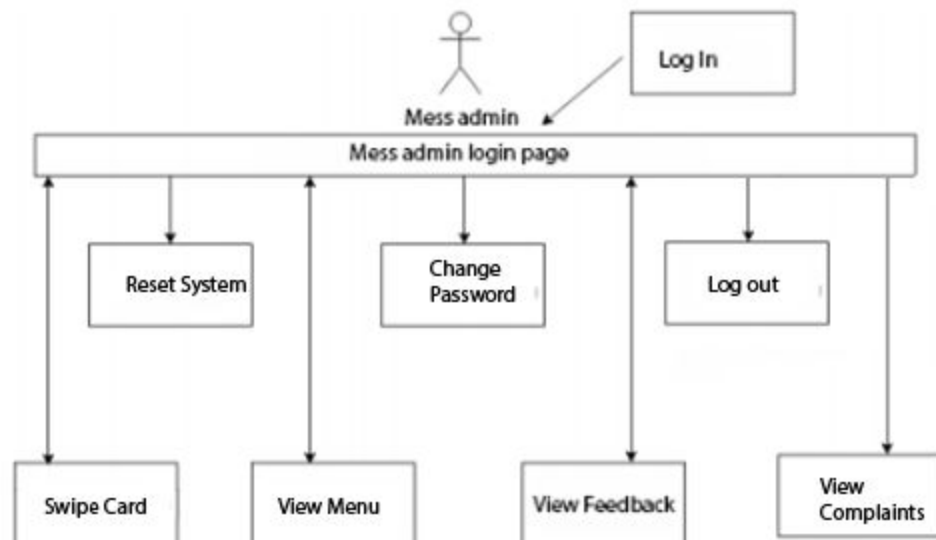
State Diagram



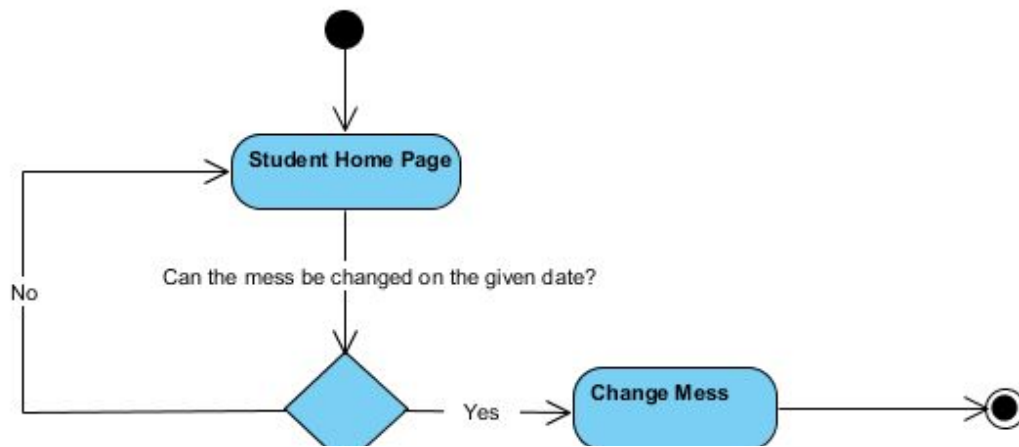
Sequence Diagram for User Login



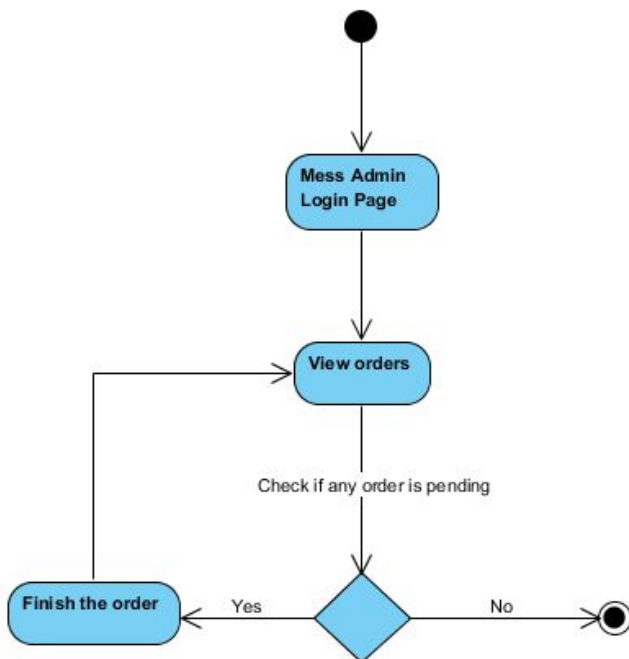
Navigation diagram for student



Navigation diagram for Mess



Activity diagram for changing the mess



Activity diagram for ordering food