A picture containing text, gear, metalware

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National University of Computer and Emerging Sciences

“Deliverable 3– USMS”

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# Project Title

UNIVERSITY SOCIETY MANAGEMENT SYSTEM -USMS

# Introduction

## 

## Purpose

The main purpose of the document is to highlight all functionalities of the system being implemented in this iteration with the help of the user stories explained in detail. Structured specifications are listed for some user stories to make the system clear and understandable for development phases. Non-functional usability, reliability, performance, and design requirements will help in developing an effective and efficient system.

The goal of the system is to create integration and collaboration between the multiple societies of the organisation. With the extremely busy study schedules it is hard for the students to keep track of all the existing societies and the events that take place time to time. University society management system eliminates this hassle and allows the students to have a single platform in order stay connected and updated to all sort of society related activities. It would allow the users to log in through their nu ids and access the information available, the members and heads of the societies, however, would have access to some extra features. This system will contain a calendar to notify both the society members and the other students about the ongoing and upcoming events in the university. The proper and timely communication between the members and their respective heads will ensure that every member is aware of their assigned task and their work. It would generate alerts to remind the users to complete their assigned work and would also generate warnings in case they are not catching up to their deadlines. The progress of every member of a society could be tracked by their heads and they would be able to add or remove members accordingly. Physical communication or communication through multiple online applications like WhatsApp and Instagram is inefficient and can cause misunderstandings however our management system can prevent this. Members will be allowed to post queries in the query section and chat with their fellow members and heads via the chatroom and can also provide feedbacks on work and events etc which will allow them to create a better interactive and professional environment. In the case where the inventory information is available, and timetable information of the member is accessible organising events and setting up meetings respectively would be much easier than personally asking every department for the inventories and members when they are available.

## Product Scope

This project is a web-based application which will be used to simplify and organize the management of the societies by providing a single platform that will help improve the coordination between them and help them run in an effective and efficient way. The user will begin by either logging into their existing profiles or signing up for a society they wish to join. The web app will show the dashboard to the user, the system will have different dashboard feature for all the different types of users (director, mentors, students, admin). It will allow the users to register new societies and view upcoming and on-going events from the calendar. It will allow the specific users to create tasks between a society, forms for merch and other inter society decisions and chat room functionality for members. The system will also allow the heads to book rooms and equipment for all society-based needs as well as get budgets and marketing requirements approved and to track progress of assigned tasks.

# User Stories

|  |  |
| --- | --- |
| **User Story ID:** | US-1 |
| **User Story Name:** | View all information |
| **User Story:** | As the director, I want to be able to see all the details and information about the societies so that I am aware of all that is happening in every society. |
| **Acceptance Criteria:** | I know I am done when I have logged in from the director’s portal and can access all information about the societies and details of all the members, heads, and events and none of the information is hidden. |

|  |  |
| --- | --- |
| **User Story ID:** | US-2 |
| **User Story Name:** | Add or Remove societies |
| **User Story:** | As the admin, I want to be able to add new societies or remove existing ones so that I can dissolve societies whose work is not satisfactory and create new ones when the need arises. |
| **Acceptance Criteria:** | I know I am done when I can select the add or delete option for societies. |

|  |  |
| --- | --- |
| **User Story ID:** | US-3 |
| **User Story Name:** | Review/update society information |
| **User Story:** | As the mentor, I want to be able to review all the details and information about the societies so that I can ensure all the information is accurate and update any inaccurate information. |
| **Acceptance Criteria:** | I know I am done when I can access all information about the societies and am able to edit information. None of the information should be hidden and the edited information should be displayed instead of the previous one. |

|  |  |
| --- | --- |
| **User Story ID:** | US-4 |
| **User Story Name:** | Update Information |
| **User Story:** | As the President, I want to be able to update information so that I can inform society members when there is some change in plans. |
| **Acceptance Criteria:** | I know I am done when I can select an option to update posts. I should be able to change the previous information then post the updated one. |

|  |  |
| --- | --- |
| **User Story ID:** | US-5 |
| **User Story Name:** | Log in |
| **User Story:** | As the user, I want to be able to login so that I can view active societies and join or take part in events |
| **Acceptance Criteria:** | I know I am done when selecting the login option allows me to enter my password. Incorrect password error message should be displayed if wrong password is entered. |

|  |  |
| --- | --- |
| **User Story ID:** | US-6 |
| **User Story Name:** | Log in for posts |
| **User Story:** | As the user, I want to be able to login according to my post so that I can access all relevant information. |
| **Acceptance Criteria:** | I know I am done when there is an option to login or sign up as student, president, head, etc. and selecting an option takes me to the relevant login portal. |
| **User Story ID:** | US-7 |
| **User Story Name:** | Register In Societies |
| **User Story:** | As the user, I want to be able register for the society of my choice when their registrations open |
| **Acceptance Criteria:** | I know I am done when I click on the register button on a societies profile and I’m taken to a registration form and I get feedback for said registration form |

|  |  |
| --- | --- |
| **User Story ID:** | US-7.1 |
| **User Story Name:** | View active societies |
| **User Story:** | As the user, I want to see all active societies so I may know which are available to join |
| **Acceptance Criteria:** | I know I am done when I can see all the active societies and can see which have registrations open |

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| --- | --- |
| **User Story ID:** | US-8 |
| **User Story Name:** | Create Registration Form |
| **User Story:** | As the president, I want to be able to create a registration form for new recruits in my society |
| **Acceptance Criteria:** | I know I am done I can create a registration form, add questions, and view responses received |

|  |  |
| --- | --- |
| **User Story ID:** | US-9 |
| **User Story Name:** | Dashboards |
| **User Story:** | As the member, I want to be able to view all pending tasks, and see upcoming events on my main screen as soon as I login |
| **Acceptance Criteria:** | I know I am done I can view all pending tasks, and can see the event calendar on my home page |

|  |  |
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| **User Story ID:** | US-10 |
| **User Story Name:** | Chat with team members |
| **User Story:** | As the President, I want to be able to interact with all the society members so that I can inform them about all that which needs to be done. |
| **Acceptance Criteria:** | I know I am done when I am able to communicate with the members via text and there should be some sort of signal showing that the messages have been sent or read. |

|  |  |
| --- | --- |
| **User Story ID:** | US-11 |
| **User Story Name:** | Make Chat Rooms |
| **User Story:** | As the member, I want to be able to communicate with team members and society heads so that I can inform them about work progress and allow them to make queries. |
| **Acceptance Criteria:** | I know I am done when I can choose an option to start a chat and send messages and there should be some sort of signal showing that the messages have been sent or read, and the members are able to reply. |

|  |  |
| --- | --- |
| **User Story ID:** | US-12 |
| **User Story Name:** | View Society hierarchy |
| **User Story:** | As the director, I want to be able to view the hierarchy of each society so that I am aware of what person is assigned at what post and what their responsibilities are. |
| **Acceptance Criteria:** | I know I am done when I login from the director’s portal and I can see the names of all the members and what position they hold in their respective society. |

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| --- | --- |
| **User Story ID:** | US-13 |
| **User Story Name:** | Update society mentors and heads |
| **User Story:** | As the director, I want to be able to change society mentors and heads so that I can choose people of my own choice for certain posts. |
| **Acceptance Criteria:** | I know I am done when I can select the option to update the society heads/mentors and add information about the new ones. A notification should be sent to the heads and mentors about the change in their assigned posts. |

|  |  |
| --- | --- |
| **User Story ID:** | US-14 |
| **User Story Name:** | Create event forms |
| **User Story:** | As the president, I want to be able to create forms for events the society is arranging so that I can send them to the appropriate persons. |
| **Acceptance Criteria:** | I know I am done when I login from the President’s portal and I am able to access an option of creating forms. I should be able to create as many forms as I like and with the option of send forms. |

|  |  |
| --- | --- |
| **User Story ID:** | US-15 |
| **User Story Name:** | Post tasks |
| **User Story:** | As the President, I want to be able to post tasks so that I can assign them to different members and inform them about the task details. |
| **Acceptance Criteria:** | I know I am done when I can select the option to post tasks and assign those tasks to certain teams or members. The members should receive some notifications about the announcement. |

|  |  |
| --- | --- |
| **User Story ID:** | US-16 |
| **User Story Name:** | Generate alerts and reminders |
| **User Story:** | As the President, I want team members to receive alerts and reminders so that they are reminded of their assigned tasks. |
| **Acceptance Criteria:** | I know I am done when team members receive notifications regarding their due work and reminders to submit their work. |

|  |  |
| --- | --- |
| **User Story ID:** | US-17 |
| **User Story Name:** | Generate Warnings |
| **User Story:** | As the President, I want to be able to send warnings to certain team members so that I can inform them about their dissatisfactory work progress. |
| **Acceptance Criteria:** | I know I am done when I can choose a send warning option and write the reason for the warning and the person who is sent a warning should receive a notification. |

|  |  |
| --- | --- |
| **User Story ID:** | US-18 |
| **User Story Name:** | Make Announcements |
| **User Story:** | As the President, I want to be able to make announcements so that I can inform all society members about upcoming plans and tasks. |
| **Acceptance Criteria:** | I know I am done when I can select an option to post write and then post that announcement. The announcement should be visible to all the relevant people, and they should get notifications about new announcements. |

|  |  |
| --- | --- |
| **User Story ID:** | US-19 |
| **User Story Name:** | Review/update society information |
| **User Story:** | As the mentor, I want to be able to review all the details and information about the societies so that I can ensure all the information is accurate and update any inaccurate information. |
| **Acceptance Criteria:** | I know I am done when I can access all information about the societies and am able to edit information. None of the information should be hidden and the edited information should be displayed instead of the previous one. |

|  |  |
| --- | --- |
| **User Story ID:** | US-20 |
| **User Story Name:** | Book Rooms |
| **User Story:** | As the President, I want to be able to book rooms so that I can organize workshops in those room without delay. |
| **Acceptance Criteria:** | I know I am done when there is an option to book rooms and the time duration for which the room is needed, and I should also be able to see which rooms are booked and un-booked on certain days and time.  (I should not be able to book a room that is already booked.)NFR? |

|  |  |
| --- | --- |
| **User Story ID:** | US-21 |
| **User Story Name:** | Make calendar for events |
| **User Story:** | As the President, I want there to be a calendar for events so that all the users are aware of the upcoming events and workshops. |
| **Acceptance Criteria:** | I know I am done when there is a calendar for every month and I can choose an option to add event in the calendar and it should be visible to everyone, and they should receive a notification when a new event/ workshop is added. |

|  |  |
| --- | --- |
| **User Story ID:** | US-22 |
| **User Story Name:** | Form teams |
| **User Story:** | As the President, I want to be able to create teams so that I can assign and divide works. |
| **Acceptance Criteria:** | I know I am done when I am able to select the option to form a team and select the members I want in that team. The members should receive some notifications about team formation. |

# Non-Functional Requirements

1. System shall require captcha to block bots from accessing or scrapping app.
2. Web Pages shall be downloadable in minimum time, preferably in 15s.
3. Web App shall identify members upon incorrect password.

# Design

## 5.1 Activity Diagrams

### Join Societies

Diagram

Description automatically generated

### Task board

Diagram

Description automatically generated

### Chat Room

Diagram

Description automatically generated

## 5.2 Use Case Diagram

Diagram, schematic

Description automatically generated

## 5.3 Sequence Diagram

Task board

Diagram

Description automatically generated

Chatroom

Graphical user interface, application, Teams

Description automatically generated

Join Societies

Graphical user interface

Description automatically generated with medium confidence

## 5.4 Class Diagram

Graphical user interface, application, Teams

Description automatically generated

# Architecture

Diagram

Description automatically generated

# Implementation Screenshots

**Login page** A picture containing text, indoor

Description automatically generated

**Socities View**

A picture containing company name

Description automatically generated

**Registration form**

Graphical user interface, application

Description automatically generated

**Director dashboard**

Graphical user interface, application

Description automatically generated

**Student Dashboard**

**Graphical user interface, application, Teams

Description automatically generated**

**Tasboard**

**Graphical user interface, application

Description automatically generated**

**Èvent Page**

**Graphical user interface, application

Description automatically generated**

**Society Page**

**Graphical user interface, application

Description automatically generated**

**Approve Society**

**Graphical user interface

Description automatically generated**

**Chatroom**

**Graphical user interface, text, application, chat or text message

Description automatically generated**

**Book Equipment**

**Graphical user interface, application

Description automatically generated**

**Event closure**

**Graphical user interface, application

Description automatically generated**

# Trello board

Graphical user interface, website

Description automatically generated

Graphical user interface, application

Description automatically generated

A computer screen capture

Description automatically generated with medium confidence

# Testing

**LOGIN PAGE**

**ROLL NUMBER**

The roll number entered by the user at the time of login must be in the format ‘XXI-XXXX’

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case#** | **Input** | **Expected Outcome** | **Actual Outcome** | **Result** |
| **1** | 20i-0974 | Please match the requested format | Please match the requested format | PASS |
| **2** | 20I-0974 | No error message | No error message | PASS |

**PASSWORD**

Assume the password of the user in the DB is ‘valid@ddvalidddValiddd12’. The password entered at the time of log in by the user must match with the password of that user stored in the database.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case#** | **Input** | **Expected Outcome** | **Actual Outcome** | **Result** |
| **1** | valid@ddvalidddValiddd1 | No error message | No error message | PASS |
| **2** | valid@dddValiddd1 | Incorrect password, user doesn’t exist | Incorrect password, user doesn’t exist | PASS |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID:** | T-1.0 | **Test Item:** | | Check valid roll number format |
| **Wrote By:** | Ayesha Zaheer | **Documented Date:** | | 20th May 2022 |
| **Test Type:** | Manual | **Test Suite:** | | NA |
| **Product Name:** | USMS Login Page | **Version No.:** | |  |
| **Test Case description:** | Only ‘XXI-XXX’ is accepted  With ‘X’ ranging from 0-9 | | | |
| **Operation procedure:** | Go to the USMS website | | | |
| Open Log in Page | | | |
| Click on the Roll number field | | | |
| Enter ‘20I-0974’ | | | |
| Press Submit | | | |
| **Pre-Condition:** | Login page is opened  Correct field is selected | | **Post-Condition:** | Redirects to the dashboard |
| **Input data/events:** | 20I-0974 | | **Expected output data/events:** | No error message Redirected to dashboard |
| **Required Test Scripts(for auto):** | NA | | | |
| **Cross references:** | NA | | | |

\*assuming that this password is stored in the database for this specific user

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID:** | T-2.0 | **Test Item:** | | Check valid password entry |
| **Wrote By:** | Ayesha Zaheer | **Documented Date:** | | 20th May 2022 |
| **Test Type:** | Manual | **Test Suite:** | | NA |
| **Product Name:** | USMS Login Page | **Version No.:** | |  |
| **Test Case description:** | The password entered by the user must match with his password stored in the database. | | | |
| **Operation procedure:** | Go to the USMS website | | | |
| Open Log in Page | | | |
| Click on the Enter password field | | | |
| Enter ‘ValidPa1@’ | | | |
| Press Submit | | | |
| **Pre-Condition:** | Login page is opened  Correct field is selected | | **Post-Condition:** | Redirects to the dashboard |
| **Input data/events:** | ValidPa1@ | | **Expected output data/events:** | No error message Redirected to dashboard |
| **Required Test Scripts (for auto):** | NA | | | |
| **Cross references:** | NA | | | |

**Add student page**

**PASSWORD**

Minimum length of password accepted is 8 and maximum length is 25 and must include at least one uppercase letter, one numeric and one special character.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case#** | **Input** | **Expected Outcome** | **Actual Outcome** | **Result** |
| **1** | inVal@1 | Password should be between 8 and 25 characters. | Password should be between 8 and 25 characters. | PASS |
| **2** | inVal112 | Password include at least one upper case letter, one number and one special character. | Password include at least one upper case letter, one number and one special character. | PASS |
| **3** | vvVal@12a | No error message | No error message | PASS |
| **4** | valid@ddvalidddValiddd12 | No error message | No error message | PASS |
| **5** | validd12valid4@Valid12345 | No error message | No error message | PASS |
| **6** | Valid1ddval@dddvaliddddddd | Password should be between 8 and 25 characters. | Error message | PASS |

**Email constraint**

The email being used shall have ‘@’

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case#** | **Input** | **Expected Outcome** | **Actual Outcome** | **Result** |
| **1** | i200974@nu.edu.pk | No error message | No error message | PASS |
| **2** | i200974nu.edu.pk | Please include an ‘@’ in the email address. | Please include an ‘@’ in the email address. | PASS |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID:** | T-3.0 | **Test Item:** | | Check valid email entry |
| **Wrote By:** | Areeba Ayaz | **Documented Date:** | | 22nd May 2022 |
| **Test Type:** | Manual | **Test Suite:** | | NA |
| **Product Name:** | USMS Add student form | **Version No.:** | |  |
| **Test Case description:** | The email entered by the user to login shall contain ‘@’ in the email. | | | |
| **Operation procedure:** | Go to the USMS website | | | |
| Open Add student form | | | |
| Click on the Enter email field | | | |
| Enter ‘i200460@nu.edu.pk’ | | | |
| Press Submit | | | |
| **Pre-Condition:** | Add student form is opened  Correct field is selected | | **Post-Condition:** | Redirects to the dashboard |
| **Input data/events:** | i200460@nu.edu.pk | | **Expected output data/events:** | No error message Redirected to dashboard |
| **Required Test Scripts (for auto):** | NA | | | |
| **Cross references:** | NA | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID:** | T-4.0 | **Test Item:** | | Check length of the password at the time of signup |
| **Wrote By:** | Ayesha Zaheer | **Documented Date:** | | 20th May 2022 |
| **Test Type:** | Manual | **Test Suite:** | | NA |
| **Product Name:** | USMS Add student Form | **Version No.:** | |  |
| **Test Case description:** | Minimum length of the password shall be 8 and max length shall be 25. | | | |
| **Operation procedure:** | Go to the USMS website | | | |
| Open Add student form | | | |
| Click on the password field | | | |
| Enter “inval@1” | | | |
| Press Submit | | | |
| **Pre-Condition:** | Add student form is opened  Correct field is selected | | **Post-Condition:** | Redirects to the dashboard |
| **Input data/events:** | inval@1 | | **Expected output data/events:** | Password should be between 8 and 25 characters. |
| **Required Test Scripts (for auto):** | NA | | | |
| **Cross references:** | NA | | | |

# Advantages and Constraints

Our University Society Management System provides collaboration between multiple societies. It enables society members to keep track of all the society events and activities. It allows the members to have a single platform to stay connected and updated on all society-related activities. The web app shows the dashboard to the different users (director, mentors, students, admin) with different features. The users can log in through their ids and access the information available; the members and heads of the societies have access to some extra features. With our application, members and heads can effectively communicate, and each member will know about their assigned task(s). Track of every member’s work progress is kept, and a warning is be generated in case of missed deadlines. Members can post queries in the query section and are able to communicate with other members and heads in the designed chatroom.

Our University Society Management System is restricted to only one device as long as it has not been uploaded on a server. A stable and working internet connection is required to run our web application. Without a working internet, you cannot run the application. Our web-based application is completely dependent on the website, so in the case of website failure, the application cannot be used.

# Lesson learnt

There should be direct and effective communication among the group members for the project to be successful. To ensure the success of the project all the people involved in the project should beware of what is happening in the project. The members need to work together efficiently to achieve the directed goal. Every member should be assigned work according to their best abilities so that best quality work can be produced. The team lead should be able to properly and timely communicate with all the members and consider their opinions regarding the project.

# Work Division

|  |  |
| --- | --- |
| Member | Role |
| Abbas Mustafa | * Front end for Dashboard, Societies, and login pages * Database Schema * Structured Specifications * Documentation * Class Diagram * NFRs * Structured Specifications |
| Areeba Ayaz | * Book Room Page * User Stories * Book Equipment Page * Test case * Add student page * Front end for forms |
| Ayesha Zaheer | * Documentation * Diagrams * User stories * Database * Test cases * Activity diagram * Architecture * NFRs * Structured Specifications |
| Faraz Amjad | * Sequence diagram * Implementation of CMS * Slides |