Hospital Management System Test Plan

**CISC 593-90- O-2023/Fall – Software Verification & Validation**

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# Introduction.

**Hospital Management System Test Plan.**

The PHP-based Hospital Management System (HMS), offers a complete solution for managing numerous hospital operations, such as patient care, administrative procedures, and staff management. It represents a substantial advancement in healthcare management software. This document functions as a comprehensive test plan, detailing the techniques and processes used to verify the system performance, dependability, and functionality.

A wide range of test cases was employed in the testing strategy , all intended to examine every aspect of the system, from user authentication to intricate administrative features. The goal was to make sure that the HMS not only met but surpasses the high standards required in healthcare management, so every component was thoroughly tested .

Below are the various test cases that were carried out to test the system.

# Test Case: Admin Login Functionality.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC001 |
| **Objective** | To ensure that admins can log in to the hospital management system with valid credentials. |
| **Preconditions** | The admin is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application.  Navigate to the admin's login page.  Enter the username admin  Enter the password Test@12345  Click on the 'Login' button. |
| **Expected Result** | The system validates the credentials and the admin is redirected to their dashboard. |
| **Actual Result** | The system validated the provided credentials and redirected the tester to the admin’s dashboard. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The admin has access to their dashboard. The system restricts access to unauthorized areas. |
| **Error Handling** | Incorrect credentials show an error message and the system limits failed login attempts. |
| **Tested By** | Sai Mukthive |
| **Test Date** | 2023-11-04 |

# Test Case: Doctor Login Functionality.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC002 |
| **Objective** | To ensure that doctors can log in to the hospital management system with valid credentials. |
| **Preconditions** | The doctor is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application.  Navigate to the doctor's login page.  Enter the username [doctor@gmail.com](mailto:doctor@gmail.com)  Enter the password Test@123  Click on the 'Login' button. |
| **Expected Result** | The system validates the credentials and the doctor is redirected to their dashboard. |
| **Actual Result** | The system validated the provided credentials and redirected the tester to the doctor’s dashboard. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The doctor has access to their dashboard. The system restricts access to unauthorized areas. |
| **Error Handling** | Incorrect credentials show an error message and the system limits failed login attempts. |
| **Tested By** | Goutham Bommu |
| **Test Date** | 2023-11-04 |

# Test Case: Patient Login Functionality.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC003 |
| **Objective** | To ensure that patients/users can log in to the hospital management system with valid credentials. |
| **Preconditions** | The user is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application.  Navigate to the patient's login page.  Enter the username [light@gmail.com](mailto:light@gmail.com)  Enter the password Test@123  Click on the 'Login' button. |
| **Expected Result** | The system validates the credentials and the patient/user is redirected to their dashboard. |
| **Actual Result** | The system validated the provided credentials and redirected the tester to the user’s dashboard. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The user has access to their dashboard. The system restricts access to unauthorized areas. |
| **Error Handling** | Incorrect credentials show an error message and the system limits failed login attempts. |
| **Tested By** | Srikanth Reddy Guttikonda |
| **Test Date** | 2023-11-04 |

# Test Case: Admin Adding A Doctor To The System .

| Field | Description |
| --- | --- |
| **Test Case ID** | TC004 |
| **Objective** | To ensure that admins can add new doctors in the hospital management system . |
| **Preconditions** | The admin is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application, log in as an admin and navigate to the admin’s dashboard.  Click on ‘Doctors’ button and click ‘Add Doctor’.  Add a doctor with the following details:  **specialization**: radiology **name**: Martin Erwien **clinic address:** 1121-NY  **doctor fees:** 300 **doctor contact:** 55178655 **doctor email :** [doc@hotmail.com](mailto:doc@hotmail.com) **password:** [Test@12345](mailto:Test@12345)  Confirm the password and click on the 'submit' button. |
| **Expected Result** | The system checks the provided doctor information gives an alert “Doctor info added Successfully.” and the admin is redirected to the manage doctors section. |
| **Actual Result** | The system checked the provided doctor information gave an alert “Doctor info added Successfully.” and the admin was redirected to the manage doctors section. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The doctor has access to their dashboard. The system restricts access to unauthorized areas. |
| **Error Handling** | Incorrect or missing information show an error message and the missing fields have to be filled. |
| **Tested By** | Sai Gunturu |
| **Test Date** | 2023-10-04 |

# Test Case: Doctor Adding A Patient To The System .

| Field | Description |
| --- | --- |
| **Test Case ID** | TC005 |
| **Objective** | To ensure that doctors can add new patients in the hospital management system . |
| **Preconditions** | The doctor is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application, log in as a doctor and navigate to the doctor’s dashboard.  Click on ‘Patients’ button and click ‘Add Patient’.  Add a Patient with the following details:  **Patient Name**: Robinson Johnson **Patient Contact no:** 55178655 **Patient Email :** [Robj@gmail.com](mailto:Robj@gmail.com) **Gender**: Male **Patient Address:** 1121-NY  **Patient Age:** 30 [**M**](mailto:Test@12345)**edical History**: pericarditis  Click on the 'submit' button. |
| **Expected Result** | The system checks the provided patient information and the doctor is redirected to the manage Patients section. |
| **Actual Result** | The system checked the provided patient information and the doctor was redirected to the manage patients section. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The doctor has access to their updated patient dashboard with new PATIENT entries added. |
| **Error Handling** | Incorrect or missing information show an error message and the missing fields have to be filled. |
| **Tested By** | Sai Mukthive |
| **Test Date** | 2023-10-04 |

# Test Case: Patient Creating An Account In The System .

| Field | Description |
| --- | --- |
| **Test Case ID** | TC006 |
| **Objective** | To ensure that patients can create user accounts in the hospital management system |
| **Preconditions** | The hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application, and navigate to the ‘patient login’ section and click the ‘login’ button and click the ‘create account’  button. Add a Patient with the following details:  **Patient Name**: Robinson Mercia **Patient Address:** 1122-NY **City:** New York **Gender**: Male **Patient Email :** [Robbiemercia@gmail.com](mailto:Robj@gmail.com)  **password:** [**Test@12345**](mailto:Test@12345) **Confirm Password:** [Test@12345](mailto:Test@12345)  Check the agree checkbox  Click on the 'submit' button. |
| **Expected Result** | The system checks the provided patient information and the patient is redirected to the Patients login section. |
| **Actual Result** | The system checked the provided information and redirected the tester to the patient’s login section. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The patient's credentials can be used to log into the system and the patient has access to their dashboard. The system restricts access to unauthorized areas. |
| **Error Handling** | Incorrect or missing information show an error message and the missing fields have to be filled. |
| **Tested By** | Sai Gunturu |
| **Test Date** | 2023-08-04 |

# Test Case: Patient Appointment Booking Functionality.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC007 |
| **Objective** | To ensure that patients can book an appointment in the hospital management system . |
| **Preconditions** | The patient is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application and log in as a patient .  Click on the ‘book appointment’ button and use the following information to book an appointment.  **Doctor specialization**: ENT **Doctors** : Mike Benson **date:** 2023-11-15  **Time** : 1:45 PM  Click on the 'submit' button. |
| **Expected Result** | The system checks the provided information and the patient gets a pop up ‘Your appointment successfully booked.’ and the page reloads. |
| **Actual Result** | The system checked the provided information, alerted ‘Your appointment successfully booked’ and the page reloaded. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The patient can see the booked appointments and the respective doctor can see the booked appointments. |
| **Error Handling** | Incorrect or missing information show an error message and the missing fields have to be filled. |
| **Tested By** | Goutham Bommu |
| **Test Date** | 2023-10-04 |

# Test Case: Doctor Viewing Appointments Functionality.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC008 |
| **Objective** | To ensure that doctors view patient appointments in the hospital management system . |
| **Preconditions** | The doctor is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application login as a doctor and click the ‘Appointment History’ button |
| **Expected Result** | The system displays all the appointments made under the respective doctor. |
| **Actual Result** | The system displayed all the appointments made under the logged in doctor . |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The doctor has access to their patient’s appointments. The system only shows appointments made under the logged in doctor. |
| **Error Handling** | In case no appointments are made. Nothing is displayed. |
| **Tested By** | Srikanth Reddy |
| **Test Date** | 2023-11-04 |

# Test Case: Admin Report Generation Functionality.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC009 |
| **Objective** | To ensure that admins can generate appointment reports in the hospital management system . |
| **Preconditions** | The admin is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application login as an admin and click the ‘Reports’ button and enter the start date: 07-11-2023 and end date 15-07-2023  Click the ‘submit’ button . |
| **Expected Result** | The system displays all the appointments within the specified time frame . |
| **Actual Result** | The system displayed all the appointments made within the selected dates . |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The admins have access to all the appointments made within the specified timeframe. |
| **Error Handling** | In case no appointments are found. A message ‘No appointments found’ is displayed |
| **Tested By** | Goutham Bommu |
| **Test Date** | 2023-11-04 |

# Test Case: Admin Updating Contact Us.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC0010 |
| **Objective** | To ensure that admins can update the contact us page details in the hospital management system . |
| **Preconditions** | The admin is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application login as an admin and click the ‘pages’ button and  click the ‘contact us’ button and add the information **page title:** Contact us  **page description:** 1006 Hidden Valley Road Gettysburg Pennsylvania USA **Email Address:** hmscontact@admin.com **mobile Number:** 7172538199  Click the ‘update’ button . |
| **Expected Result** | The system displays a message ‘Contact Us has been updated.’ and the page reloads. |
| **Actual Result** | The system displayed a message ‘Contact Us has been updated.’ and the page reloaded. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The contact us content will be updated in all pages . |
| **Error Handling** | A message ‘error updating contact us’ is displayed in case an error occurs when updating the contact us page. |
| **Tested By** | Sai Gunturu |
| **Test Date** | 2023-11-04 |

# Test Case: Admin Updating About Us.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC0011 |
| **Objective** | To ensure that admins can update the about us page details in the hospital management system . |
| **Preconditions** | The admin is registered in the system , valid credentials are available and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application login as an admin and click the ‘pages’ button and  click the ‘about us’ button and add the information **page title:** About us  **page description:** The Hospital Management System (HMS) is crafted for hospitals aiming to transition from their current manual, paper-driven systems. This contemporary system is built to oversee patient details, room status, staff and operating room timetables, as well as patient billing. The objective is to deliver these functionalities in a streamlined manner, minimizing the time and resources traditionally dedicated to such processes.  Click the ‘submit’ button . |
| **Expected Result** | The system displays a message ‘About Us has been updated.’ and the page reloads. |
| **Actual Result** | The system displayed a message ‘About Us has been updated.’ and the page reloaded. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The About us content will be updated in all pages . |
| **Error Handling** | A message ‘error updating About us’ is displayed in case an error occurs when updating the About us page. |
| **Tested By** | Srikanth Guttikonda |
| **Test Date** | 2023-11-04 |

# Test Case: Log Out Functionality.

| Field | Description |
| --- | --- |
| **Test Case ID** | TC0012 |
| **Objective** | To ensure that patients,doctors and admins logged in the hospital management system can log out. |
| **Preconditions** | The doctor,patient or admin is logged in, in the system and the hospital management system is accessible. |
| **Test Steps** | Launch the hospital management system application login as a doctor,admin or patient .  Click the user avatar  Click the ‘logout’ button |
| **Expected Result** | The system logs out the logged in system user and takes them to the homepage. |
| **Actual Result** | The system logged out the logged in user and redirected the user to the homepage. |
| **Status (Pass/Fail)** | Pass |
| **Postconditions** | The logged out user has access to the homepage. |
| **Error Handling** | The system displays an error in the case of failed log out ‘error logging out’ |
| **Tested By** | Sai Mukthive |
| **Test Date** | 2023-11-04 |

# Conclusion.

Upon the completion of an exhaustive series of tests, as detailed in this test plan, I have systematically validated the functionality and robustness of the Hospital Management System. Each test case, ranging from user login procedures to intricate administrative tasks, has been executed with precision, and the outcomes documented.

The results of these tests provide a solid foundation for asserting that the HMS is not only functional but also reliable and user-friendly. As we move forward, this test plan will serve as a benchmark for future enhancements, ensuring that the HMS continues to evolve and adapt to the ever-changing landscape of healthcare technology.