A picture containing logo

Description automatically generated

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| School of Computing and Informatics |
| Website Design and Development |
| Test Plan  Student name: Abdullah Istanbuli  Student id: 21110366  Section number: 03 |
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# Scope (in scope, out scope)

The website is designed for HTU students to reserve classrooms for group study sessions it will cover scenarios where students need a quiet and collaborative space, where they can be free and not restricted from having dissections, the finished website will facilitate the booking of these classrooms, making it easy for student to find and reserve appropriate study environment.

# Schedule

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| --- | --- | --- | --- | --- | --- |
| **No** | **Date from** | **Date to** | **Number of hours** | **Test Type *(Responsiveness, form validation, consistency … etc.)*** | **Description** |
| **1** | Sign up page | 22/8 | 8 | Form validation,  Database saving,  ,Usability,Layout,Functionality | In this page we have to test the main form of sign up and the navigation bar and the database link |
| **2** | Sign in page | 23/8 | 8 | Form validation  ,Usability,Layout,Functionality | In this page we have to test the main form of login and the navigation bar and the database link |
| **3** | Home page | 24/8 | 8 | Layout,Functionality | In this page we have to check all the elements and their layout |
| **4** | Book page | 25/8 | 8 | Form validation,  Database saving changes and retrieving,Usability,Layout,Functionality | In this page we have to check the layout and the form and the database link |
| **5** | Booking history page | 26/8 | 8 | Form validation,  Database saving changes and retrieving,Usability,Layout,Functionality | In this page we have to check the layout the database changes and the functionality and usability of the page |
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# Test Cases (at least 25 Test cases)

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| --- | --- | --- | --- | --- | --- |
| **No** | **Description** | **Type *(Responsive, Navigation, look and feel, page titles, form validation ..etc.)*** | **Steps** | **Expected results** | **status** |
| **1** | Verify successful login with correct credentials. | Login functionality, form validation | Enter a valid email or username and password. Click the "Login" button. | User is redirected to the home page | success |
| **2** | Verify unsuccessful login with incorrect credential | Login functionality, form validation | Enter an invalid email or username and/or password Click the "Login" button | An error message is displayed indicating incorrect credentials | success |
| **3** | Verify that empty fields are not allowed for login | Form validation | Leave the email/username or password field empty | An error message is displayed indicating that fields cannot be empty. | success |
| **4** | Verify successful signup with valid credentials | Signup functionality, form validation | Enter a valid username, email, and matching passwords | User is redirected to the login page | success |
| **5** | Verify that an invalid email address is not allowed | Form validation | Enter an invalid email address | An error message is displayed indicating an invalid email format. | success |
| **6** | Verify that mismatched passwords are not allowed | Form validation | Enter two different passwords in the password fields | An error message is displayed indicating that the passwords must match. | success |
| **7** | Verify that duplicate usernames are not allowed | Signup functionality, form validation | Attempt to create an account with a username that already exists | An error message is displayed indicating that the username is already in use. | failed |
| **8** | Verify that navigation links work as expected | Navigation | Click on the "Book Now" link  Click on the "About" link  Click on the "Contact" link  Hover over the user icon and click on "Login" and "Booking History" | User is redirected to the corresponding page or place | success |
| **9** | Verify successful booking with valid input | Form validation, submission | Enter valid values for all fields | User is redirected to the booking history page | success |
| **10** | Verify that invalid input is not allowed | Form validation | Enter invalid values for any field | An error message is displayed indicating invalid input | success |
| **11** | Verify that the room dropdown works as expected | User interaction, form elements | Select a room from the dropdown | The selected room is displayed correctly | success |
| **12** | Verify that bookings are displayed correctly | Data display, user interface | Make a booking | The newly created booking is displayed in the list | success |
| **13** | Verify that bookings can be edited | User interaction, data modification | Click the "Edit" button for a booking.  Make changes to the booking details.  Click the "Update" button. | The booking is updated with the new details | success |
| **14** | Verify that bookings can be deleted | User interaction, data deletion | Click the "Delete" button for a booking | The booking is deleted from the list | success |
| **15** | Verify that the website is responsive and adapts to different screen sizes. | Responsive design | View the website on different devices and screen sizes. | The website displays correctly and is usable on all devices | success |
| **16** | Verify that the navigation bar works as expected | Navigation | Click on each link in the navigation bar | User is redirected to the corresponding page | success |
| **17** | Verify that the website's look and feel is consistent and visually appealing | Look and feel, user experience | View the website and assess its overall appearance | The website has a consistent and visually appealing design | Done / success |
| **18** | Verify that page titles are descriptive and relevant | Page titles, SEO | View the page titles for each page | Page titles are descriptive and accurately reflect the page content. | done |
| **19** | Verify that form validation works as expected | Form validation | Attempt to submit forms with invalid input | Error messages are displayed indicating invalid input | success |
| **20** | Verify that the website is accessible to users with disabilities | Accessibility | Use assistive technologies to navigate the website | The website is accessible to users with disabilities | done |
| **21** | Verify that the website loads quickly and performs efficiently | Performance | Measure the website's load time and performance | The website loads quickly and performs efficiently | success |
| **22** | Verify that the website is compatible with different web browsers | Browser compatibility | View the website in different web browsers | The website displays correctly and functions as expected in all supported browsers. | success |
| **23** | Verify that the website is secure and protects user data | Security | Assess the website's security measures | The website has appropriate security measures in place | failed |
| **24** | Verify that the website provides a positive user experience | User experience | Use the website and assess its usability and ease of navigation | The website is easy to use and provides a positive user experience. | success |
| **25** | Verify that contact works as expected | Contact validation | Press on the contact in the footer | Contact way is available for the user | success |
| **26** |  |  |  |  |  |
| **27** |  |  |  |  |  |
| **28** |  |  |  |  |  |
| **29** |  |  |  |  |  |
| **30** |  |  |  |  |  |

# Evaluate the Quality Assurance (QA) process

# Requirements

Booking form functionality:

the bookings form collect the information correctly and the form is user-friendly and easy to navigate and there are rules to the form to prevent invalid input

authentication:

there is a secure authentication process in place (login) but the user credentials are at risk since there isn't an encryption on the credentials but the security measure I took to reduce exposure is to use only the user id for the session to keep the user logged in instead of the normal credentials in the session.

Booking history functionality

the student can see and edit/delete the booking history and the interface is user-friendly and easy to navigate

justification:

while the use of user ID in the session is a positive step it doesn’t full address the security risk coming from the unencrypted data

the lack of a mechanism to prevent duplicated username could lead to security vulnerabilities

# Design

the pages are designed in such a way that it provides user-friendly and clarity for the users experience all the input fields are clearly outlined and marked for the user to know what he should do.

overall design

the overall design provides a strong user-friendliness and a good UX easy to navigate and good color pallet the sections of the website are well designed

consistency in the overall pages and it provide a good responsiveness for multiple sizes for the screens

# Front-end Development

The front-end test case focus on the UI, UX, and visual elements of the web app the cover many aspects:

UI:

* navigation
* layout and design
* accessibility

UX:

* usability
* clarity of instructions
* error handling

visual elements:

* consistency of the design
* correct display of content
* image elements

# Back-end Development

The back-end test cases focus on the server-side functionality data management and security

data management:

* data storage and retrieval
* data validation
* performance

# Critical evaluation of the results of your Test Plan.

I will include the test cases where the website didn’t preform at 100% of the expectation:

Verify that the website is secure and protects user data:

the website failed in this area the data requests and responses aren't encrypted but there is a positive in this area is that the session doesn't have the full credentials only the use id overall 20-40 % success

Verify that the website is accessible to users with disabilities:

the website is ready for people with disabilities in the context of input fields only because of that the success of this case was 70 %

Verify that page titles are descriptive and relevant:

the pages did have relevant titles but not descriptive overall success rate 60 %

Verify that the website's look and feel is consistent and visually appealing:

the overall design of the website is excellent but it was not done by a professional with experience so the overall success rate is 85 %

Verify that duplicate usernames are not allowed:

in this case the website failed since the user name duplication wasn't handled correctly

0 %

# Review of the overall success areas of the multipage website.

### ****Positive Aspects:****

* **Booking Form Functionality:** The booking form is functioning correctly, with accurate data collection and user-friendly navigation.
* **Booking History Functionality:** Students can successfully view, edit, and delete their booking history, and the interface is user-friendly.
* **Accessibility for people with disabilities (to some extent):** The website is partially accessible, at least in terms of input fields. However, further testing is needed to ensure full accessibility.
* **Design (partially):** The website's overall design is visually appealing, but there may be areas for improvement in terms of professional expertise.
* **Functionality:** the web app provides a well handled functionalities over all.

**Overall Review:**

While the website demonstrates some positive aspects, particularly in terms of booking functionality and user interface, the critical failures in security and duplicate username handling significantly impact its overall quality.

# Justified recommendations for areas that require improvement.

There are many areas where the web app could benefit from more professional work done to put the web app in the lunching area:

**fix duplicated information:** one of the major issues in the web app is this that in creating new account the web app doesn’t check for the information if it is already in the data base which could improve the website overall significantly

**stronger security measures:** other then the obvious unavailable encryption I believe that the web app could benefit from a security audit and improvements in the security area

**less important improvement:**

**seeking more professional designer input:** although the design is good but if the web app is going to officially lunch it could use a more professional designer touch for it

i**mplementing searching and filtering feature**: in the booking history the current way to display booking history is to display all of them I believe that could be improved by adding a status for the booking (improve, disapproved, pending) and a way to filter out the bookings.