Task 1: Test Strategy

**1. Log In Component**

The Log In component is critical for user authentication and access control. It consists of the following sub-components:

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| --- | --- | --- | --- | --- |
| **Date of test** | **Component to be tested** | **Type of test to be carried out** | **Details** | **Prerequisites and dependencies** |
| **01/01/2024**  **Morning Test**  **1** | **Username/Email Input Field** | **Functional Testing(BlackBox testing)** | **Verify that the input field accepts valid usernames/emails and rejects invalid formats. Test for edge cases (e.g., special characters, long strings).** | **Database Setup: Required for testing Log In, Sign Up, and Data Storage.**  **Database must be set up and accessible.**  **Test Data: Valid and invalid test data must be prepared for all input fields and error handling.**  **Valid and invalid test data must be prepared.**  **The log in will need to be functional since the user needs to access the data. It will test to see if the correct user is logged in into the correct account** |
| **01/01/2024**  **Evening Test**  **2** | **Password Input Field** | **Functional Testing(BlackBox testing)** | **Ensure the password field masks input and validates password requirements (e.g., minimum length, special characters). Test for error messages when requirements are not met.** | **Password validation rules must be defined.**  **Test Data: Valid and invalid test data must be prepared for all input fields and error handling.**  **Test data for valid and invalid passwords must be prepared.** |
| **02/01/2024**  **Morning Test**  **3** | **Login Button** | **Functional Testing(BlackBox testing)** | **Test if the button is clickable and triggers the login process. Verify that it is disabled when the fields are empty.** | **- Frontend and backend must be integrated. - Test cases for empty fields must be prepared.** |
| **02/02/2024**  **Evening Test**  **4** | **Error Handling** | **Functional Testing(BlackBox testing)** | **Test the error messages for any invalid credentials, such as empty fields and server-side errors (e.g. "Invalid username/password," "Please fill in all fields").** | **- Error messages must be defined.**  **- Test data for invalid credentials and server errors must be prepared.** |
| **04/01/2024**  **Morning test**  **5** | **Redirect Logic** | **Unit Testing(White Box)** | **Test the JavaScript code to ensure the user is redirected to the homepage after successful login. Verify the correct session data is passed.** | **- Homepage must be fully developed. - Session management must be implemented.** |
| **2. Sign Up Component**  **The Sign-Up component allows new users to create accounts. It consists of the following sub-components:** | | | | |
| **05/01/2024**  **6** | **Name Input Field** | **Functional Testing(BlackBox testing)** | **Verify that the field accepts valid names and rejects invalid formats (e.g., numbers, special characters).** | **- Name validation rules must be defined. - Test data for valid and invalid names must be prepared.** |
| **06/01/2024**  **7** | **Email Input Field** | **Functional Testing(BlackBox testing)** | **Test for valid and invalid email formats. Ensure error messages are displayed for invalid inputs.** | **- Email validation rules must be defined. - Test data for valid and invalid emails must be prepared.** |
| **07/01/2024**  **8** | **Password Input Field** | **Functional Testing(BlackBox testing)** | **Verify password requirements (e.g., minimum length, special characters). Test for error messages when requirements are not met.** | **- Password validation rules must be defined. - Test data for valid and invalid passwords must be prepared.** |
| **08/01/2024**  **9** | **Confirm Password Input Field** | **Functional Testing**  **(BlackBox testing)** | **Ensure the field matches the password field. Test for error messages when passwords do not match.** | **- Password matching logic must be implemented. - Test data for mismatched passwords must be prepared.** |
| **09/01/2024**  **10** | **Sign Up Button** | **Functional Testing(BlackBox testing)** | **Test if the button is clickable and triggers the sign-up process. Verify that it is disabled when fields are empty.** | **- Frontend and backend must be integrated. - Test cases for empty fields must be prepared.** |
| **09/01/2024**  **11** | **Error Handling** | **Unit Testing(White Box)** | **Test error messages for duplicate emails, password mismatches, and server-side errors.** | **- Error messages must be defined. - Test data for duplicate emails and server errors must be prepared.** |
| **10/01/2024**  **12** | **Data Storage** | **Unit Testing**  **(White Box)** | **Test the JavaScript code to ensure user details are saved to the server. Verify the data is stored correctly and can be retrieved.** | **- Database must be set up and accessible. - Test data for user details must be prepared.** |
| **3. Navbar Component**  **The Navbar component provides navigation across the website. It consists of the following sub-components:** | | | | |
| **11/01/2024**  **13** | **Logo** | **Unit Testing**  **(White Box)** | **Verify the logo is displayed correctly and links to the homepage when clicked.** | **- Homepage must be fully developed. - Logo asset must be available.** |
| **12/01/2024**  **14** | **Navigation Links** | **Unit Testing**  **(White Box)** | **Test each link to ensure it redirects to the correct page. Verify hover and active states.** | **- All linked pages must be developed. - Test cases for each link must be prepared.** |
| **13/01/2024**  **15** | **Dropdown Menus** | **Unit Testing**  **(White Box)** | **Test dropdown functionality (if applicable). Verify that menus expand/collapse correctly and links work as intended.** | **Dropdown menu logic must be implemented. - Test cases for dropdown functionality must be prepared.** |
| **14/01/2024**  **16** | **Navbar Integration** | **Integration Testing**  **(BlackBox testing)** | **Test the navbar's compatibility with all webpages. Ensure it renders correctly and functions seamlessly across different pages.** | **All webpages must be fully developed. - Test cases for cross-page compatibility must be prepared.** |
| **4. Accessibility. Accessibility testing ensures the website is usable by all users, including those with disabilities. Sub-components include:** | | | | |
| **15/01/2024**  **17** | **Keyboard Navigation** | **Non-Functional Testing**  **(BlackBox testing)** | **Verify that all interactive elements (e.g., buttons, links) are accessible via keyboard.** | **- All interactive elements must be implemented. - Test cases for keyboard navigation must be prepared.** |
| **16/01/2024**  **18** | **Screen Reader Compatibility** | **Non-Functional Testing(BlackBox testing)** | **Test compatibility with screen readers (e.g., JAWS, NVDA). Ensure all elements are read correctly.** | **- Screen reader testing tools must be set up. - Test cases for screen reader compatibility must be prepared.** |
| **17/01/2024**  **19** | **Color Contrast** | **Non-Functional Testing**  **(BlackBox testing)** | **Verify color contrast meets WCAG standards for readability.** | **- Color contrast testing tools must be set up. - Test cases for color contrast must be prepared.** |
| **18/01/2024**  **20** | **Alt Text for Images** | **Non-Functional Testing**  **(BlackBox testing)** | **Ensure all images have descriptive alt text for screen readers.** | **- All images must be implemented with alt text. - Test cases for alt text must be prepared.** |
| **5. Home Page The Home Page is the main landing page of the website. Sub-components include:** | | | | |
| **19/01/2024**  **21** | **Hero Section** | **Functional Testing**  **(BlackBox testing)** | **Verify the hero section displays correctly and includes all required elements (e.g., headline, image, button).** | **Hero section design must be finalized. - Test data for hero section content must be prepared.** |
| **20/01/2024**  **22** | **Call-to-Action Buttons** | **Functional Testing**  **(BlackBox testing)** | **Test buttons to ensure they redirect to the correct pages or trigger the intended actions.** | **- All linked pages must be developed. - Test cases for button functionality must be prepared** |
| **21/01/2024**  **23** | **Featured Content** | **Functional Testing**  **(BlackBox testing)** | **Verify that featured content (e.g. articles, products) is displayed correctly and links work as intended.** | **Featured content must be available. - Test cases for featured content must be prepared.** |
| **22/01/2024**  **24** | **Home Page Integration** | **System Testing**  **(BlackBox testing)** | **Test the homepage as part of the entire system to ensure it meets all functional and non-functional requirements.** | **- All other components must be fully developed. - Test cases for system integration must be prepared.** |
| **6. Website (Overall)** | | | | |
| **23/01/2024**  **25** | **Website** | **Acceptance Testing**  **(BlackBox testing)** | **Evaluate the website with end-users and stakeholders to ensure it meets their needs and expectations. Gather feedback and make final adjustments.** | **- All components must be fully developed and tested. - Stakeholders and end-users must be available for testing.** |

**Summary of Dependencies and Prerequisites**

1. **Database Setup**: Required for testing Log In, Sign Up, and Data Storage.
2. **Test Data**: Valid and invalid test data must be prepared for all input fields and error handling.
3. **Frontend and Backend Integration**: Required for testing interactive components like buttons and forms.
4. **Error Messages**: Must be defined and implemented for functional and unit testing.
5. **Testing Tools**: Tools for accessibility (e.g., screen readers, color contrast checkers) and unit testing (e.g., JavaScript testing frameworks) must be set up.
6. **Stakeholder Availability**: Required for acceptance testing.