Test Plan

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**1-Introduction:**

Website: Our website is dedicated to simplifying English learning from A1 to B2 levels. We provide structured resources covering grammar, listening, writing, speaking, reading, vocabulary, and customized quizzes/tests for each category. Our goal is to make learning English straightforward and accessible for all.

Test plan objective: The primary goal of this test plan is to ensure the functionality, usability, and effectiveness of the English learning website across various levels (A1 to B2). This plan aims to validate the accuracy and reliability of the platform's content, features, and user experience.

**Test Scope:**

* **Functional Validation:**

Thoroughly test each module (grammar, listening, writing, speaking, reading, vocabulary) to confirm proper functionality.

* **Usability and User Experience:**

usability tests to assess the ease of navigation and intuitiveness of user interactions within the website.

Evaluate the clarity and effectiveness of instructions provided for various learning modules.

* **Performance Assessment:**

Measure website loading times and Stress, especially for multimedia elements (audio, video) and interactive features and identify and address any performance-related issues that may impact user experience.

* **Security:**

Conduct a database security assessment by testing for vulnerabilities like SQL injection. Evaluate the website's resilience against cross-site scripting (XSS) attacks. Verify the secure use communication protocols, particularly ensuring the use of HTTPS.

**2-Test Items:**

* User Registration and login
* User account management
* Listening audio files, Button in home page
* Speaking video, Button in home page
* Reading readability and proper text display across devices, Button in home page
* Writing Button in home page
* Quizzes/Tests
* Content accuracy
* Links buttons
* Vocabulary Game, Button
* Contact
* Website logo

**- Features to be tested:**

* User Registration and login
* User account management
* Listening audio files, Button in home page
* Speaking video, Button in home page
* Reading readability and proper text display across devices, Button in home page\
* Writing Button in home page
* Quizzes/Tests
* Vocabulary Game, Button
* Contact/Email
* Website Logo

**- Features not to be tested:**

* Content accuracy:

The website focuses on testing the platform's functionality rather than verifying the accuracy of all learning materials, which is handled separately by subject matter experts or educators.

* Links buttons:

As the website is still under development, certain links and buttons are not currently active or directed.

* User Login: Forget password feature will not be tested as it uses third party (Email organization)
* Contact: social media section will not be tested as the website links are not completely ready

**5-Approch:**

-Testing Methods:

* Functional Testing: Use a step-by-step examination to verify each key component (grammar, listening, writing, speaking, reading, vocabulary) by way of scenario-based testing to make sure it works properly using testing tool (selenium).
* Usability Testing: observe users to evaluate how easy it is to move around in the system and understand instructions given as well as gaining overall user experience.
* Performance Testing: Measure website loading times and Stress, assess responsiveness especially for multimedia content using performance testing tools (JMeter).
* Security: testing website security by applying SQL injection, XSS attacks

-Testing Tools:

* Automated Testing: Utilize automated testing tools (Selenium) for functional and

regression testing to ensure comprehensive coverage and efficient testing.

* Using JMeter tool for performance testing.

-Testing Environment:

* Simulate various devices (desktop, tablet, mobile) and browsers (Chrome, Firefox, Safari) to verify cross-device and cross-browser compatibility.

-Test Data:

* encompasses a wide range of scenarios, including both positive and negative cases, to ensure thorough test coverage.

**6- Item pass/fail criteria:**

We will have different conditions to determine if the test item passes or fails depending on the feature.

* User Registration and login:

Pass: The website behaves correctly by allowing successful login upon entering valid information. It should refresh the website and enable login. For invalid information, it displays meaningful error messages.

Fail: The website fails to authenticate valid user information, preventing successful login or displaying incorrect error messages for valid information. For invalid information, it grants access or fails to provide appropriate error messages.

* User account management:

Pass: The website facilitates user information updates upon entry of valid inputs. It effectively presents meaningful error messages for invalid information.

Fail: User information updates are allowed even when the entered data is invalid (e.g., non-email input in the email section). display of incorrect or nonspecific error messages when the user attempts to enter invalid information.

* Listening audio files:

Pass: The audio plays seamlessly, allowing easy start and stop functionalities based on user interactions.

Fail: The audio fails to initiate or stop in response to the user pressing the correct buttons, indicating an unsuccessful performance.

* Speaking video:

Pass: Video content is displayed appropriately, accompanied by audible audio if available. Users can conveniently start, stop, and rewatch the video content.

Fail: Video content experiences delays in loading or fails to display entirely, also not allowing users to stop or rewatching the video content.

* Reading readability and proper text display across devices:

Pass: Text consistently appears in the correct size, format, and readability across various devices, ensuring ease of reading.

Fail: Text fails to maintain the correct size when transitioning across devices or becomes challenging to read due to formatting issues, such as inappropriate text color or size.

* Quizzes/Tests:

Pass: The website proficiently determines the correctness of user answers across all question types, efficiently storing and calculating user grades. It accurately displays correct answers upon test completion for all questions.

Fail: Incorrect answers are displayed upon test completion, irrespective of question types. Additionally, the website fails to accurately evaluate the correctness of user responses for all question variations, leading to inaccurate grading and storing wrong grades.

* Vocabulary Game:

Pass: Website successfully Transfer the user to the game page.

Fail: Website does not transfer the user successfully to the game page.

* Read More button:

Pass: Website successfully Transfer the user to desired page.

Fail: Website does not Transfer the user to desired page successfully.

* Contact/Email:

Pass: Website successfully Transfer the user to email (message section).

Fail: website failed to transfer the user.

* Website Logo

Pass: User returned to home page.

Fail: website failed to transfer user to home page.

**7- suspension/resumption criteria:**

* **Suspension:**

Incomplete Requirements: Test items that lack clear or complete requirements, making it impractical to continue testing.

Environment Issues: an issue in the environment which effect testers from testing the items.

Modification in the test plan: that alters the prioritization of test items, resulting in the suspension of certain items.

* **Resumption:**

Requirements completed: test items have completed all their requirements and are ready to be tested.

Stable Environment: Environmental work that allows the testers to proceed with the testing process with no issue.

Modification in the test plan: when the suspension item came to its prioritization position, they resume their testing.

**8-Test Deliverables:**

**Test Cases:**

* TestCaseID: A unique identifier or number for the test case.
* Scenario: Describing the function or feature being tested along with the specific scenario being evaluated.
* Test Case Title: A name for the test case, summarizing its purpose.
* Description: An explanation of what aspect of the software is being tested.
* Steps: Sequential instructions detailing the actions or procedures to execute the test.
* Test Data: Information regarding any specific data used during the test, aiding in replicating the test conditions.
* Expected Result: The anticipated outcome or behavior from the software after each test step.
* Actual Result: The observed behavior or outcome from the software after executing the test steps.

Together, these attributes form a structured framework for systematically testing software, ensuring that it functions as expected and documenting any discrepancies between expected and actual behavior.

**Test Execution:** Test cases will be executed using selenium or JMeter, result and code will be pictured.

**Defect Management:** if any defect is found during the test execution, it will be reported and set their priority it.

* Defect Level: This indicates the significance of the issue concerning the website.
* Defect Count: Keeping track of how many issues have been identified during testing.
* Resolved Defects: The number of reported issues that have been fixed.
* Outstanding Defects: Issues that are currently in the process of being addressed or haven't been resolved yet.
* Defect Description: Detailed explanations outlining each reported issue for better understanding and resolution.

**Test Summary:**

* Functionality: which feature/function.
* Total test cases: Total count of test cases designed for testing.
* Number of Untested Cases: Count of cases that haven't been executed or tested yet.
* Passed Cases: Count of test cases that have been executed successfully without any discrepancies.
* Failed Cases: Count of test cases that exhibited deviations or failures from expected behavior.
* Execution Percentage of Tested Cases: Percentage of executed test cases out of the total designed test cases.
* Completion Percentage: the completeness of testing based on the pass, fail.
* State: According to the value specified by the testing team for the minimum completion Percentage the feature will be declared as pass or fail

**Test coverage:**

* Functionality: which feature/function.
* Prioritization: prioritization level
* Total possible cases: Total count of all the possible Scenario
* Number of actual Cases: how many Scenarios have been tested.
* Test coverage Percentage: the completeness of coverage based on Number of actual

Cases and Total possible cases.

**9- Environmental needs:**

* Python: Availability of Python interpreter and necessary libraries installed on testing machines.
* Selenium: Setup Selenium WebDriver for automated testing.
* Version Compatibility: Ensuring compatibility between Python, Selenium, and the website being tested.
* Stable Internet Connection: Reliable internet access to execute tests without interruptions or connectivity issues.
* JMeter: Setup Apache JMeter application for performance testing.

|  |  |  |
| --- | --- | --- |
| Task | Start Date | End Date |
| Website | 16/12/2023 | 26/12/2023 |
| Test Plan | 20/12/2023 | 23/12/2023 |
| Functionality Testing | 26/12/2023 | 28/12/2023 |
| Performance Testing | 26/12/2023 | 27/12/2023 |
| Test Execution documentation | 29/12/2023 | 30/12/2023 |
| Usability Testing | 1/1/2024 | 3/1/2024 |
| Security Testing | 1/1/2024 | 6/1/2024 |
| Preparing the power point | 4/1/2023 | 6/1/2024 |

**10-** **Schedule:**

|  |  |  |
| --- | --- | --- |
| Member Name | Job Role | Task |
| Faisal Salama | Manager/Test Leader | Test Plan/Approval |
| Majeed Alberawi | Website developer | Develop the website |

**11- Responsibilities:**

**12-Risks and Assumptions:**

* Risks:

1. Performance Obstacles: Challenges hindering employee productivity.
2. Data Security: Potential risks of breaches or unauthorized access.
3. Staff Illness: Possible impact on work continuity due to employee health issues.
4. Content Accuracy: Risks of inaccurate educational materials affecting learning quality.

* Assumptions:

1. Stable Testing Environment: Assurance of a consistent testing environment.
2. Quality Learning Material: Expectation of accurate and high-quality educational content.
3. Access to Necessary Tools: Assumption of employee access to essential resources.
4. Cooperation from Developers: Expectation of collaboration and support from the development team.

**13- Approvals:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Manager | Review | Approved | Unapproved | Signature | Date |
| Faisal Salama | ✓ | ✓ |  | ✓ | 1/7/2024 |