Test Plan Documentation

ICTAK Website

GROUP: 2

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1. INTRODUCTION:

This test plan document describes the objectives, scope, reference, and test plan identifier of the ICTAK Website. The document lists the features to be tested and not to be tested. It then discusses the high-level testing schedule and the resource responsible for testing each of the features. It then briefly describes the pass/fail criteria and risks associated with the testing. The document ends with a detailed description of the test case that will be executed as part of the testing.

2. OBJECTIVE:

The purpose of the ICTAK website is to help the students know about the courses provided by the academy, the fees for each course, and the duration of the courses.

The main objectives of this test plan are:

- Providing information about the level of quality of the website.
- To make sure that the end result meets the business and user requirements.
- To identify how the tests will be conducted.
- Test whether the website meets all the functional and non-functional requirements.
- To make sure that it meets all customer requirements by successfully passing all test cases.
- To make sure that it maintains the quality of the product.

3. SCOPE:

The scope of this document is to test the ICTAK website.

3.1 FUNCTION TO BE TESTED:

- Trainer Login

- Home Page

- About Us

- Course page
    1. Apply for new course
    2. Membership Details

a. Get Access
3. Check whether redirects to Twitter, Facebook, LinkedIn, and YouTube sites are successful after clicking the corresponding buttons.
4. Check the ICT Logo.

- Membership page
    1. Academic membership
    2. Corporate membership Registration Form
    3. Partnership Registration Form
        1) Download Proposal

- Events
    1. ICSET
    2. Techathlon
    3. ICTAK Event 1
    4. Sample

- Contact page
    1. Messaging Form
- Logout

3.2 FUNCTION NOT TO BE TESTED:

- Payment Approach for course registeration.
- Paatshala anchor tag.
- ICTAK Event1 & Sample.
- FIND OUT MORE Button in the Home Page.
- Social media buttons at the top of the About Us Page.
- Follow and Social Media Buttons of the members in the About Us Page.
- Search buttons in the Courses Section.
- Download Reports Button in the Partnership Section.
- Social media and Get Access buttons in the Events Section.
- Subscribe button in the Contact Us Section.
- Sign Up and Settings in the Admin Login Section.
- Edited details is not displayed in the Courses of the Admin Dashboard.

4. APPROACH:

A test approach is the test strategy implementation of a project, defining how testing would be carried out. An approach in which the test design process is initiated as early as possible in order to find and fix the defects before the build is created. An approach in which the testing is not started until after design and coding are completed.

4.1: FUNCTIONAL TESTING:

Functional Testing checks if the website works in accordance with predetermined requirements. Functional tests comprise a variety of sub-categories:

I. **Unit testing:-** this process involves the testing of particular system components. These components are isolated from other portions and tested for their input, output, and module procedures.

II. **Integration Testing:-** Integration testing procedures incorporate system components and how they perform together functionally between one another. System parts are built together forming new interfaces and these are tested to determine.

III. **System Testing:-** System testing of software is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements.

IV. **Regression testing:-** Regression test is carried out to check modification in software has not caused unintended adverse side effects that affects the core functionality of the system.

4.2: NON-FUNCTIONAL TESTING:

I. **Performance Testing:** Performance testing evaluates how certain software performs under different conditions. Performance testing is necessary to ensure that software operates at expected quality levels at all times. It checks parameters such as application output, data transfer speed, data processing speed, network bandwidth use, load-bearing capacity, memory consumption, command response times, etc.

5. PASS/FAIL CRITERIA

The pass or fail criteria in a test plan define the conditions that must be met for a test to be considered successful (pass) or unsuccessful (fail).These criteria are essential for ensuring that the software or system under test meets the specified requirements and is ready for release.

5.1 Pass criteria

- Understand the requirements of the software or system being tested.
- expected results should be based on the requirements and specifications.
- Determine the conditions that must be met for a test case to be considered as "Passed."

5.2 Fail criteria

- Identify the conditions that indicate a test case has failed.
- This may include deviations from expected behavior, errors, crashes, or other undesirable outcomes.

6. SUSPENSION CRITERIA AND RESUMPTION CRITERIA:

This section outlines the circumstances that would result in the partial or complete suspension of testing.

6.1 criteria:

- The build contains many serious defects which seriously or limit testing progress.
- Hardware/software not available at the time indicated in the project schedule.
- Testing will be suspended when 40% or more of the defects are open.
- Testing will be suspended if blocked defects have not been fixed.
- Certain portions of tests may be suspended or skipped if prerequisite tests have previously failed.

6.2 Resumption Criteria:

- Include information about the suspension, reasons for it, and actions taken during the resumption.
- The test case shall be re-run from the beginning of the test once the problem has been logged and a solution to the problem implemented.
- In case of website unavailability, testing will be resumed after access to the Website is re-established.

7. ENTRY AND EXIT CRITERIA:

7.1 Entry Criteria:

- All the standard software tools including the testing tools must have been successfully installed and functioning properly.
- All test hardware platforms must have been successfully installed, configured, and functioning properly.
- An approved Test Plan.
- Availability of sufficient and desired test data.
- Test cases are developed and ready.

7.2 Exit Criteria:

- Execution of all test cases.
- All the identified defects are fixed and closed.
- Desired and sufficient coverage of the requirements and functionalities under the test.
- No high priority or severity or critical bug has been left out.
- Maintaining defects with their status.
- User acceptance testing has been completed and signed off by stakeholders.

8. TEST DELIVERABLES:

The following test documents will be supplied:

Before the testing phase:

- Test Strategy

- Test Plan Document

During the testing phase:

- Test scenarios
- Test scripts
- Test Data
- RTM(Requirement Traceability Matrix)
- Execution Logs

After the testing phase:

- Test Results/reports
- Defect / Bug Report
- Installation/ Test procedures guidelines
- Release notes
- Test Summary Report

9. REMAINING TEST TASKS:

- Usability Testing
- Verify compatibility with various operating systems (Windows, macOS, Linux).
- Accessibility Testing
- Ensure that new changes do not negatively impact existing functionalities.
- Verify the responsiveness of the application on mobile devices.
- Load testing to assess the system's response under expected load conditions.
- Stress testing to identify the application's breaking point.
- Validate that data entered into the system is stored correctly in the database.
- Verify the accuracy of Terms and Conditions, privacy policies, and Licenses(ICTAK).

10. ENVIRONMENTAL NEEDS:

ICTAK website application, which is under development must be tested to ensure it works on different phones (like iPhones and Android phones), browsers, operating systems, networks, and other real-world situations. Below are the hardware and software requirements for the test environment.

Test Environment	Personal computer workstations used during system testing must have the following configuration:	
	Operating systems (OS): Windows 7 or Higher	**Browsers:** Google Chrome Mozilla Firefox, and Edge.
Defect management	JIRA	
Network Infrastructure	Stable internet connectivity.	
IDE	Eclipse	
Project Management	JIRA, GitHub	

10.1 Testing Tools:

The following test tools will be used to support the test process for this Test Plan:

TOOLS	PROCESS
MS EXCEL	To create and organize test cases and track execution status.
AUTOMATION-SELENIUM	Functional Testing
PACHE JMETER (5.6.2)	Non-Functional Testing

11. STAFFING AND TRAINING NEEDS:

It is preferred that all the four team members are present throughout the testing phases of the project. Each team member should have the knowledge about all tools to carry out the entire testing process. It is the responsibility of the project

manager to ensure the training of the team members. In order to provide complete and proper testing the following areas need to be addressed in terms of training:

- The developers and testers will need to be trained on the basic operations for accomplishing manual testing.
- The testers also need training on the Selenium tool to perform automation testing of the assigned website.
- All the members of the team must have knowledge on JMeter in order to carry out the required performance testing.
- The testers should be familiar with the JIRA to ensure efficient project management.

12. ROLES & RESPONSIBILITIES:

Role	Staff Member	Responsibilities
Testers	Aishwarya G., Anagha P. Kumar, Anju R., Vaishnavi Krishnan	• Interact with the web application • Understand and find test scenarios and test cases for ICTAK Website. • Write test cases • Test execution • Find defects • Find Solutions • Report creation

13. TEST MILESTONES & SCHEDULE:

MILESTONE	TIME DURATION
Creating test plan	Start Dt.: 15/01/2024 End Dt.: 20/01/2024
Test Case Creation	Start Dt.: 21/01/2024 End Dt.: 26/01/2024
Test Case Execution-Functional Testing	Start Dt.: 27/01/2024 End Dt.: 02/02/2024
Non-Functional Testing- Performance testing	Start Dt.: 03/02/2024 End Dt.:09/02/2024
Project and Report Submission	Start Dt.: 10/02/2024 End Dt.: 12/02/2024

14. PLANNING RISKS:

- Project schedule is too tight. Delay in starting the testing phase due to design issues.
- Not having sufficient resources, delay in the onboarding process, or new team members lack the required skills for website testing.

- Defects found in later stages are time-consuming and may be due to design flaws or unclear specifications and take more time to fix.
- Though functionalities are completely defined, changes can be requested by the client.

- Non-availability of independent test environments and accessibility causing delays.
- Wrong budget estimate and cost overrun.

15. MITIGATION PLAN:

- Starting early with static testing and document verifications and other preparation tasks. Set test priority for each test activity.
- Some extra time added should be added for contingencies while calculating time required to finish the testing tasks.
- Making sure on-boarding happens swiftly and ensuring proper knowledge transfer.
- Reallocating to other staff who might be free.
- Plan training courses to skill up your members.
- Proper defect management plan in place.
- Using the right tools to raise defects and mark priority for developers to fix.
- Dynamic allocation of resources and time and proper defect tracking to make sure the new issues are fixed or closed in given time.
- Flexible test plan to incorporate new test cases and removal of redundant scenarios.
- Proper communication between testing teams in different projects and planning in advance to make sure sufficient hours are made available and share resources.
- Pay a lot of attention to project planning and constantly track and measure the progress.

16. POINT OF CONTACT:

The following people can be contacted in reference to this document

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17. REFERENCE:

List of documents that support test plan document

1. Software Requirement Specification Report
2. IEEE 829 standards and guideline

19. VERSION HISTORY:

VERSION NUMBER	DATE	AUTHOR	SUMMARY OF CHANGES
1.0.0	18/01/2024	Aishwarya G., Anagha P. Kumar, Anju R., Vaishnavi Krishnan	Initial Draft
1.0.1	22/01/2024	Aishwarya G., Anagha P. Kumar, Anju R., Vaishnavi Krishnan	Made the changes mentioned by the reviewer which includes alignment, margin, scope updation and removal of duplicated details.

20. REVIEWAL & APPROVAL:

REVIEWER/APPROVER	SIGNATURE
Mr. Subin P John	