Test Plan

Project Name **: ICTAK Alumni Job Portal**

Prepared by **: Group 4**

- Arya Krishnan
- Ayisha Nizamudin
- Deepthi Pallikara
- Hasna P V
- Sabu Sebastian
- Swathikrishna S S

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1.0 Summary

The Test Plan is designed to prescribe the scope, approach, resources, and schedule of all testing activities of the ICTAK Alumni Job Portal(**https://delightful-earrings-fish.cyclic.app**/) Web-based application .This Job portal is designed to cater to employers and job seekers. The main objective of this website is to help the alumni, users, employers as well as the ICTAK authorities to make the recruitment process easier by sharing the updated details regarding the jobs.

The plan identifies the items to be tested, the features to be tested, the types of testing to be performed, the personnel responsible for testing, the resources and schedule required to complete testing, and the risks associated with the mitigation plan.

2.0 Scope

This Test Plan describes the integration and system tests that will be conducted on the ICTAK Alumni Job Portal, following integration of the subsystems and components identified.
It is assumed that unit testing already provided thorough black box testing, extensive coverage of source code, and testing of all module interfaces.

Features to be Tested are:

2.1. **Functional testing of all user features**:

- 2.1.1. **Sign Up and Login Functionality** - Admin, Employer, Alumni, Faculty are able to sign up after entering the details and login after entering the registered credentials.
- 2.1.2. **Create Job Posting** - Admin, Faculty and Employers can create job postings.
- 2.1.3. **View Job Postings and Response** - All visitors of the web portal are able to see posting and only registered Alumni can respond to the job postings.
- 2.1.4. **Type of Response to a job posting** - A registered alumni is able to respond to a job posting either as a PDF file submission or as an online link.
- 2.1.5. **Job Posting and Cut-off Date** - Jobs posted by Admin, Faculty and Employers must have a cut-off date and that date is automatically disabled after the cut-off date.
- 2.1.6. **Verify Submissions and Forward**- Admins are able to verify the submissions by Alumni and forward the same to Employer/ Post Owner.

2.2. **Integration testing of the application with combining multiple functionalities**.

2.3. **The most critical performance measures to test are:**

- 2.3.1. Testing of the application's responsiveness and compatibility across multiple devices and browsers.
- 2.3.2. Testing of the application’s security features such as user authentication and data encryption.
- 2.3.3. Performance testing of the application to ensure it can handle high traffic and load times.
- 2.3.4. Testing of the application’s usability, including user-friendly navigation and accessibility.

3.0 Out of scope

These features are not to be tested since they are not entailed in software requirement specifications

- Support language other than English.
- Upload video resume.
- API Testing
- DB Testing

4.0 Test Approaches

- **Unit Testing :** Testing involves analyzing each module of the web application.
- **Integration Testing :** Used to test the data flow from one module or component to other modules.
- **System Testing :** Used to test the software's functional and nonfunctional requirements.
- **Acceptance Testing :** Which is used to evaluate whether a specification or the requirements are met in the end user's perspective.
- **Performance Testing :** Performance tests evaluate how a system performs under a particular workload.

5.0 Assumptions

- Admin,faculty,alumni,employer can sign and login in the portal and can made changes according to their requirements
- The object code will be fully unit and integration tested and made available on the test environment by the dates given in the schedule for executing the test scripts.
- All approved Decision Requests and Change requests will be forwarded upon approval to the Test Team Leader to ensure that the test scripts are modified and the function re-tested,where necessary.

6.0 Schedule

Sl No	Scheduled Tasks	Date Schedule - Start	Date Schedule - End
1.	TestPlan Creation	5/2/2023	11/2/2023
2.	Develop manual test case scenarios	12/2/2023	18/2/2023
3.	Automate the test scenarios using scripts	19/2/2023	25/2/2023
4.	Perform functional tests and validate if everything works according to the requirements	19/2/2023	25/2/2023
5.	Do Performance testing and generate reports	26/2/2023	4/3/2023
6.	Deploy the work in Github	4/3/2023	5/3/2023

7.0 Roles and Responsibilities

SL NO	Role	Responsibilities	Name
1.	Tester	Review and analyze system specifications. Prepare a Test plan. Prepare Manual test cases and analyze results. Prepare Automation Test Scripts. Execute Automation tests and analyze results. Perform functional tests and Validate the results. Do performance testing using Jmeter and generate Reports.	Arya Krishnan Ayisha Nizamudin Deepthi pallikara Hasna P V Swathikrishna S S Sabu Sebastian

8.0 Deliverables

Test deliverables required before the testing phase.

- Test plans document.
- Test cases documents
- Test Design specifications.

Test deliverables required during the testing

- Test Scripts.
- Test Data.
- Test Traceability Matrix
- Error logs and execution logs.

Test deliverables required after the testing cycle is over.

- Test Results/reports
- Defect Report

- Installation/ Test procedures
- Release notes

9.0 Environmental Setup or Tools

Sl No	Resources	Description
1	Test tool	The testing tool is to automate the testing, simulate the operation and generate the results.
	• MS Excel/Word	Test Plan and Test case creation.
	• Eclipse IDE	Developing the scripts.
	• Selenium, TestNG, Maven, Apache POI	Test case execution and automation.
	• JMeter	Testing the performance and generating reports
2	Project Management tool	Used for organizing and managing the project tasks effectively
	• JIRA	Planning, assigning, tracking and reporting each task among the team members. Generating various types of reports.
	• Google Drive, GitHub	Common repository to share our work.
3	Test Environment	A testing environment is a setup of software and hardware on which the testing team is going to execute test cases.
	• Hardware - Computer	Min of 6 machines with Windows 10, 8 Gb Ram or higher configurations.
	• Software - MS Windows	Supporting the testing tools and framework.
	• Network	Setup a LAN Gigabit and 1 internet line with the speed at least 5 Mb/s.

10.0 Risk & Risk Mitigation Plan

Requirements Risk: Requirements may be unclear or incomplete, leading to unexpected results.

Mitigation: Conduct a thorough review of requirements, involve Project managers/mentors in requirement gathering process/sprint meetings and get the doubts cleared, use prototypes and simulations to validate requirements.

Schedule Risk: Testing may take longer than planned, causing delays in the project timeline.

Mitigation: Establish a realistic testing schedule, prioritize duties and responsibilities tests, allocate enough resources for testing.

Resource Risk: Key personnel or required resources may become unavailable, affecting testing.

Mitigation: Identify critical personnel and resources, have backup resources in place, establish clear roles and responsibilities for testing team members.

Environment Risk: Testing environment may not be available.

Mitigation: Coordinate with the project managers/mentors to fix the environmental issues asap, and cover the delayed works with adding extra resources/time.

Data Risk: Data required for testing may not be available or may be of poor quality.

Mitigation: Establish a data management plan, obtain data from multiple sources, use data masking and de-identification techniques to protect sensitive data.

Security Risk: Testing activities may expose sensitive information or cause security incidents.

Mitigation: Limit access to sensitive information, regularly monitor testing activities for security risks.

Technical Risk: New or untested technologies may cause unexpected issues during testing.

Mitigation: Conduct research on new technologies, involve experts in technology evaluations, implement pilot tests to assess technology reliability, develop contingency plans for technology failures.

11.0 Exit Criteria

- ➢ All test cases have been executed and the results have been documented.
- ➢ All high-priority defects have been addressed and resolved.
- ➢ The product has been successfully tested in the target environment.
- ➢ User acceptance criteria have been met.
- ➢ Performance testing has been completed and meets the established performance goals.

- All required documentation and test artifacts have been produced and reviewed.
- All stakeholders have agreed that the product is ready for release.
- No major risks or issues have been identified that would prevent the product from being released.
- A final test report has been produced and approved.