System Testing Master Test Plan

for

“eGAWA: Online Freelance Service Platform

EGWO-FSP1.0.0

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MASTER TEST PLAN

1 TEST PLAN IDENTIFIER EGWO-FSP1.0.0

2 REFERENCES

None Identified.

3 INTRODUCTION

This document serves as the Master Test Plan for the eGAWA: Online Freelance Service Platform. It outlines the testing approach for components and objects associated with the Company/Employer and Freelancer workflows. We will consider all factors, including both direct and indirect influences. The main objective of this plan is to confirm that the created eGAWA: Online Freelance Service Platform is functioning as intended purpose while also assessing the system's adaptability and flexibility, which will allow for improvements to the system's efficiency. We aim to identify and address any potential issues or shortcomings, ensuring that it performs seamlessly in real-world scenarios.

The project employs a single testing level, namely System Testing, with further elaboration on its specifics provided in another section of the test plan. Given the project's estimated timeline of six months, which is relatively brief, any setbacks during the development stages could significantly impact the execution of this test plan. Delays in the testing phase may result from various factors, including unexpected technical challenges, resource constraints, or changes in project requirements.

4 TEST ITEMS

The following is the list of items to be tested

A. Registration Module **– v4.1**
B. Sign In Module – **v4.1**
C. Company Profile Module **– v4.2**
D. Company Homepage Module **– v4.3**
E. Job Posting Module **– v4.4**
F. Freelancer Profile Module **– v4.5**
G. Freelancer Homepage Module **– v4.6**
H. Job Application Module **– v4.7**
I. Messaging Module **– v4.8**

5 SOFTWARE RISK ISSUES

Some items are not directly within the eGAWA: Online Freelance Service Platform but may have an impact on the overall process of the web application, this must be validated as well.

A. Market Competition, staying competitive in a fast-paced market may require continuous innovation and feature updates. Failure to keep up with industry trends can lead to a loss of users.

B. The capability to resume tasks smoothly following a disruption in the connection during activities like having a transaction, editing profile, adding catalog and much more.

B. Database access levels should restrict access, granting only administrators for the ability to access, read, and edit information that pertains specifically to them.

C. Regulatory Compliance, the Online Freelance Service Platform may need to adhere to various legal regulations, depending on location and the nature of the services offered. Failure to comply can lead to legal issues.

D. The system scalability, as these platforms grow, they need to handle increasing traffic, user accounts, and concurrent activities. Scalability issues can lead to performance problems and downtimes.

6 FEATURES TO BE TESTED

The following is a list of the features to be tested and focused on during testing of the web application, these are arranged per level of priority.

A. HIGH PRIORITY

i. Job Posting Feature

ii. Job Application Feature

iii. Messaging Feature

B. MEDIUM PRIORITY

i. Sign In Feature

ii. Usability of User Interface

iii. Registration Feature

C. LOW PRIORITY

i. Freelance Profile Feature

ii. Freelancer Homepage Feature

iii. Company Homepage Feature

7 FEATURES NOT TO BE TESTED

The following is a list of the features that will not be tested due to some limitations or as a result of other testing efforts.

A. Admin Usage Management Module

As it is specialized user access that typically provides administrative controls and user management features. It's designed for internal use by administrators or superusers. Since it's not a customer-facing feature, the primary focus of testing is often on the functionalities that directly impact end-users.

B. File Information that Users Upload

User-uploaded files such as identification card are outside of the scope of this project, these files are under the control of the users. The data contained in the files that the users upload is entirely at their discretion.

C. Freelancer Skill Validation

While the platform can verify user profiles, credentials, and portfolios, it may not explicitly test the actual skills of freelancers. Skill validation often depends on client feedback and ratings.

D. Client Review and Feedback

The platform implemented a review and feedback page after the transaction, but the overall satisfaction of clients with the services provided by freelancers may not be tested directly.

E. Freelancer Availability

The platform can show a freelancer as "available," but it may not test if the freelancer is genuinely available at all times. Availability depends on freelancers' personal schedules.

8 APPROACH (STRATEGY)

8.1. Testing Levels

Testing for the eGAWA: Online Freelance Service Platform will exclusively consist of System Testing. This phase will involve two (2) separate test individuals, with the intention of reducing developer involvement for having potential biases.

System Testing will be conducted primarily by independent testers, with limited developer involvement. For data input automation, Selenium and Robot Framework will be deployed. The system is allowed a maximum of one major defect, provided it doesn't impede the testing process. Before proceeding to system testing, any major defects from lower levels must be resolved and no longer exist to validate system readiness. This prerequisite is essential to ensure the system's readiness for comprehensive system testing, where the focus should be on assessing its overall functionality and performance rather than dealing with unresolved issues from earlier stages of testing.

Various techniques will be employed, including but not limited to Boundary Value Analysis (BVA), State Transition Testing (STT), Equivalence Partitioning (EP), Decision Table Testing (DTT), and Use Case Testing. The combination of these testing methodologies ensures a thorough approach to verify the software's quality and functionality.

During the system testing phase, the testers are expected to perform various types of testing, including:

A. **Usability Testing** which is primary purpose is to determine how well the system meets the needs and expectations of its intended users.

B. **Regression Testing** which will focuses on ensuring that changes or updates to a software application, such as code modifications, new features, bug fixes, or enhancements, do not introduce new defects or negatively impact the existing functionality of the system.

C. **Load Testing** it will simulate a large number of concurrent users or transactions interacting with the application. It allows organizations to proactively identify and address performance issues before they impact real users, ensuring that the software or system can deliver a smooth and responsive experience even under heavy load conditions.

D. **Functional Testing t**o ensure that the software functions correctly, produces the expected results, and meets the end-users' needs.

8.2. Configuration Management/Change Control

In our software development process, we employ version control with GitHub to effectively manage changes to the codebase. It's imperative that all version changes are carefully preserved in backups and accompanied by comprehensive documentation. This ensures that a past record of alterations is readily available for reference, analysis, and potential rollbacks.

As part of this process, it is important to maintain a comprehensive change log, which will document all change requests, including their priority, brief description, and details. Additionally, to conduct a more thorough evaluation of a particular change, a Change Request Form will be needed.

8.3. Test Tools

This is a list of testing tools that will be used for evaluating the eGAWA: Online Freelance Service Platform.

A. Selenium IDE

Selenium IDE will predominantly serve the purpose of conducting regression testing, along with some aspects of functional testing. This approach is aimed at optimizing efficiency, particularly for recurring test cases, as it minimizes the time expended on repetitive testing procedures. The report generation. registration and profile editing will undergo validation by the Selenium IDE to check whether the outcomes align with the expected results.

B. Robot Framework

It is used for automating test cases and acceptance testing. It offers a versatile and extensible approach to automation, making it as a consideration to use for both testers and developers.

8.4. Meetings

The test team will be scheduling a meeting once a week to monitor progress and identify any issues regarding to the testing process and also the system functionality that will happen. With this approach our developers will come up with a solution efficiently as soon as possible. This will also promote effective communication and collaboration among team members, fostering a proactive and solution-oriented approach to testing the tester managed.

8.5. Measures and Metrics

The Development Team will gather the following data throughout the Unit testing phase, which will then be shared with the testing team upon program turnover and also shared with the project team per week.

1. Issues categorized by module and their respective severity levels
2. Defect Origin (Requirement, Design, Code)
3. The duration taken to address individual critical and major defects.
4. Total duration spent addressing minor defects.
5. Defects identified in higher testing levels that ideally should have been detected during lower testing stages.

9 ITEM PASS/FAIL CRITERIA

System testing will be deemed as concluded once all required test cases have been executed and successfully passed. This should align with the testing coverage criteria set by stakeholders. The test manager is responsible for compiling the reports generated by their team and handling them over to the project manager. A meeting will be scheduled to review the results. The testing will be considered unsuccessful if it doesn't meet all expected requirements and reveals multiple defects within the system.

10 SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS

10.1. Critical Defect Discovery

If a critical defect is identified during testing that poses a significant risk to the system's functionality or security, testing may be may encounter delay until the issue is resolved.

10.1. If there's no testers available

Testing may encounter delays if there are no testers available to conduct the testing activities. It will remain in effect until an adequate number of testers become available to resume the testing process.

10.2. Certain Features Not Yet Ready

Features that are not yet complete but are scheduled for testing will be temporarily suspended to prevent potentially inaccurate results. These testing activities will be rescheduled once the project developers have finished implementing the features.

10.3. Features with Dependencies Not Yet Prepared

If a module within a subsystem remains incomplete, the entire subsystem's testing will be postponed. It's important that system testing is comprehensive and leaves no component untested.

10.4. Environmental Issues

In case there are environmental problems, such as network outages or server failures, that impact the testing environment and cannot be immediately resolved, testing may be suspended.

11 TEST DELIVERABLES

A. Test Plan Document

B. Test Cases

C. Tools and their Outputs

D. Problem Report and Corrective Actions

E. Test Logs

12 REMAINING TEST TASKS

TASK	Assigned To	Status
Create System Test Plan	TM, PM, Dev.	
Tools and their Outputs	Dev, PM, TM,	
Problem Report and Corrective Actions	Dev, PM, TM	

13 ENVIRONMENTAL NEEDS

The following items are required to carry out the testing effort in this test plan at all levels within the project:

A. Stable Internet access.

B. PHP is set up on the development machine.

C. Selenium IDE & Robot Framework installed on the development machine.

D. Access to connect to the main database.

E. Availability to use backups

14 STAFFING AND TRAINING NEEDS

It is recommended that there are two Testers at all the testing levels, the developer's assistance may be needed on system testing.

A. Both developers and testers will undergo training on the Selenium IDE, as it is highly important for conducting System Testing.

B. A minimum of one tester should acquire training in Robot Framework usage, specifically for conducting acceptance testing.

C. In order to construct a web application that is suitable to automation, the developer should be knowledgeable in implementing PHP and knowledgeable with test automation concepts.

15 RESPONSIBILITIES

	Project Manager	Dev Team Manager	Test Team Manager	Dev Team	Test Team
Schedule Conflict Resolutions	X				
Selenium IDE Training		X	X		
Robot Framework Training			X		X
Risk Assessment	X	X	X		
System Test Execution		X	X	X	X
System Test Documentation			X		X
System Test Verification	X				
Test Coverage Acceptance	X				

The Project Manager holds ultimate responsibility for addressing important decisions, including the resolution of scheduling conflicts, evaluation of risks, and the formulation of contingency plans. Furthermore, they are assigned with the task of confirming the present testing stage and making the determination regarding whether the test coverage works and meets the necessary criteria.

The Development Team Manager will be in supporting the project manager by evaluating potential development-related risks, which may include delayed feature

delivery or not enough resources. Their expertise is instrumental in identifying and addressing the challenges, ensuring a smoother project progression.

The Development Team Manager and the Test Team Manager jointly hold the responsibility of delivering training on Selenium IDE automation to both the development and testing teams.

The Test Team Manager will evaluate potential testing-related risks, which could include time constraints and potential disruptions during testing phases. In collaboration with the project manager, they help formulate strategies to address these risks effectively, to enhance the overall project's quality.

The Development Team has the responsibility for carrying out test execution, ensuring that the developed software is thoroughly tested for quality and functionality before deployment. This involves the identification and resolution of issues, contributing to the overall reliability and performance of the product.

The Test Team revolves around conducting system test execution, with occasional involvement from the Development Team. The Development Team's participation is primarily limited to a supporting role, and they do not participate in determining the outcomes of the test execution. The Test Team is also responsible for the documentation of the systems tests outcomes or results that will be presented for the Project Manager.

16 SCHEDULE

The time allocations are specified within the timeline of the master project plan. The entire team must work in coordination, with minor adjustments allowed as a precautionary measure. Any such adjustments must be recorded by team leaders and reported to the project manager for proper documentation.

A. Regular weekly meetings are on the schedule.

B. Test Executions will follow a relatively structured schedule, with development activities aligned to their corresponding testing activities in terms of timing and coordination.

C. Test Team will primarily handle System Testing, with only a limited level of support from the development team.

D. Regression Testing should be performed whenever new functionalities are introduced, but exclusively on the modules that are connected by these changes.

E. Load Testing should be conducted once the functionalities have been confirmed as valid. A single major defect is acceptable, provided it does not disrupt the primary program flow.

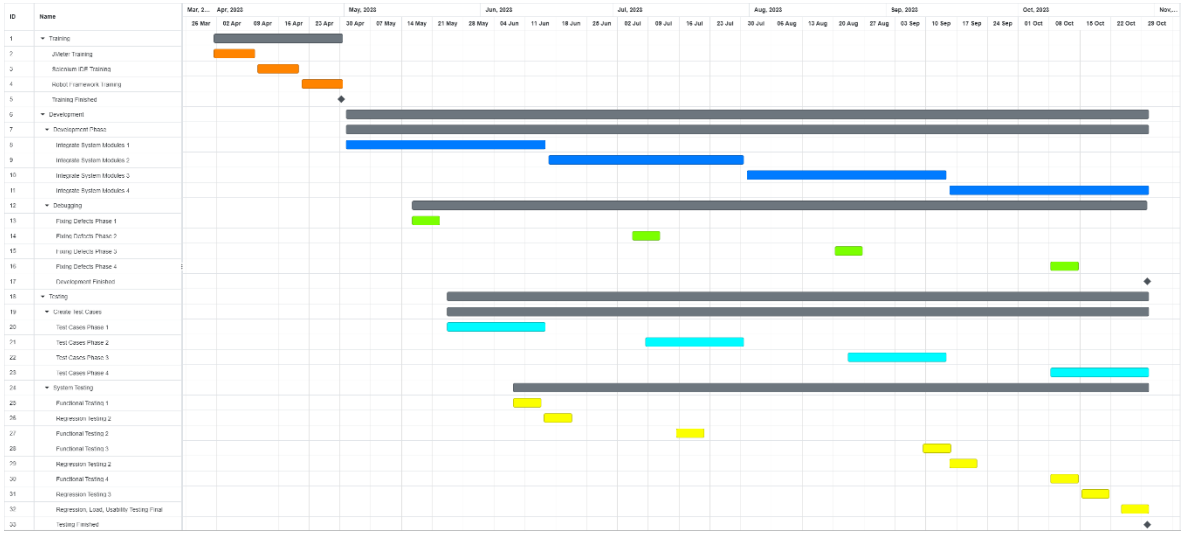

Figure 1.0 Project Gantt Chart

Figure 1.0 shows the Gantt Chart of how the testing project will be carried out, since the sprint methodology is being utilized, the testing will be done synchronously with the development activities and will be done in sprints.

The initial month will be dedicated to different training objectives to ensure that individuals and teams have the knowledge and skills needed to properly use the tools provided. The remaining months will focus on interconnecting subsystems to form a testable system. Each of these phases will have its own designated testing schedule, ensuring that the testing process is synchronized with the development timeline for maximum efficiency and quality assurance.

17 PLANNING RISKS AND CONTINGENCIES

A. Lack of Availability of Required Software

Delays may occur when the project team faces challenges in obtaining the necessary software essential for the testing process. In such instances, it's important to promptly address these software availability issues to maintain project progress and timelines.

B. Training for the Usage of Tools

The Project delays can also arise when there is a need for training in the proper utilization of essential tools. To minimize this potential issue, it's advisable to ensure

that team members receive timely and effective training, allowing them to use the required tools proficiently and without interruptions to the project's timeline.

A. Delayed Major Features

It's essential to closely monitor and address any major feature delays promptly to minimize their impact on the overall project timeline and deliverables.

B. Changes in Overall Schedule

When the initial project schedule experiences delays or disruptions, it can necessitate adjustments to the overall timeline. These changes may involve shifting task priorities and allocating additional resources.

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18 APPROVALS

Project Manager – Bok, Arvin C,	
Development Team Manager – Cristobal, Mark Josh Adrian N.	
Test Team Manager – Leonor Jr., Joel T.	
Test Team Manager – Sulit, John Paulo B.	

19 GLOSSARY

A. Definitions

PHP	It is a pre-built software foundation that simplifies web application development by providing a structured and organized environment.
Freelancer	An independent professional who offers their services or expertise to clients on a project-by-project basis.
Database	Structured collection of data organized in a way that allows for efficient storage, retrieval, and manipulation of information.
Selenium IDE	It is often used for creating simple automated tests and performing quick exploratory testing of web applications.
Robot Framework	An open-source test automation framework designed for both acceptance testing and robotic process automation (RPA).
System Testing	System testing assesses the entire software system to ensure it meets quality and functionality standards before user deployment.

Gantt Chart	A visual timeline tool for tasks, activities, and events with start and end dates.
Regression Testing	It ensures that recent changes have not adversely affected the existing functionality.
Load Testing	Kind of performance testing evaluates how a system or software program operates under actual and peak conditions.
Functional Testing	It focuses on evaluating the functional aspects of a software application.
Prototype	Preliminary of the system that is created for the purpose of testing, evaluating, and validating design ideas.
Equivalence Partition	Technique used to systematically divide a range of input values or test conditions into groups
Boundary Value Analysis	Technique that focuses on testing the boundary values of input ranges to identify potential defects.
State Transition Testing	Focuses on the transitions between different states of a system or application.
Decision Table Testing	Technique which operates effectively for testing software that has complex business rules or logical conditions.
Use Case Testing	Focuses on validating the functionality of a software application by testing real-world scenarios or use cases.