
Quality Assurance Plan

actiTIME

2nd November 2023

19020465- G.B.M Meegoda

1 Introduction

1.1 PURPOSE

The main aim of this Test Plan is to outline the approach, methodologies, and strategies for testing the actiTIME HR management application. This document becomes a guide for the testing process. It provides a clear strategy for the test team to make sure that the functionality of the application, its performance, security, and compliance meet the expected quality standards. Also, it enables effective communication among the team members and different stakeholders, by providing a clear understanding of the testing objectives and expectations for the HR management system.

1.2 PROJECT OVERVIEW

The aim of the project is to validate the HR Management application, actiTIME, which is a web-based timesheet solution that is suitable for businesses of all sizes and types. actiTIME is advantageous because it simplifies time tracking, leave management, and reporting by helping to efficiently organize work and also increase performance. It also serves as a valuable tool for billing and payroll data collection. The validation process makes sure that the HR personnel can log in, access employee profiles, review attendance and leave reports, and manage timesheets effectively.

2 Scope

2.1 IN-SCOPE

- Validation of HR Management application functionality
- Verification of the login process with valid credentials
- Access and viewing of employee profiles
- Review of leave and attendance reports
- Approval and rejection of timesheets

2.2 OUT-OF-SCOPE

The Functionalities Under these Components will not be tested

- Task Management
- Project Tracking
- Billing & Invoicing
- Integrations
- Customer Care
- Team Management

3 Testing Strategy

3.1 PRODUCT/APPLICATION/SOLUTION RISKS

Risks	Criticality	Mitigation Strategy
Integration Issues with HR Systems	Medium	Perform testing to ensure smooth integration with various HR systems.
Data Loss or Corruption	High	Regularly backup all user data and apply data recovery procedures.
Performance Bottlenecks	Medium	Conduct load and performance testing to identify potential bottlenecks.
Data Privacy Compliance	High	Complying with relevant data privacy regulations
Inaccurate Leave and Attendance Calculations	Medium	Developing test cases for leave and attendance calculations. Thoroughly validate the ability of the system to correctly track and calculate leaves

3.2 LEVEL OF TESTING

Test Type	Description
Functional Testing	Validate that the application's functions work as expected, such as login, profile access, leave management, and timesheet approval/rejection.

Integration Testing	Verify the seamless integration of the HR management application with HR systems and other relevant software.
Performance Testing	Assess the application's speed, responsiveness, and resource utilization under various conditions, such as load, stress, and scalability
User Acceptance Testing	Involve end-users in testing to ensure that the application meets their requirements and expectations.

3.2.1 Functional Testing

Functional Testing for the HR management system focuses on validating its main capabilities. This includes testing the login process with valid credentials, making sure HR persons can access employee profiles, reviewing leave and attendance reports, and approving or rejecting timesheets. The main goal is to verify that the system's functions meet the specific requirements, by offering HR professionals a user-friendly experience in managing HR-related tasks

3.2.2 Regression Testing

Regression Testing is important to ensure the stability of the HR management system. It consists of re-testing existing features to check for any missed side effects of new updates or changes. By conducting Regression Testing, the system can maintain its quality and reliability, and any faults introduced during the development or maintenance process can be identified and addressed, this ensures the functions are uninterrupted and provide a consistent user experience.

3.3.3 Non-Functional Testing

Non-Functional Testing covers different aspects beyond the HR management system's main functions. It includes Performance Testing to test the speed and resource usage, Security Testing to protect sensitive data, Usability Testing to increase user-friendliness, Accessibility Testing for inclusivity, and Compliance Testing to confirm that relevant regulations are adhered to. The system is also subjected to Load Testing, Scalability Testing, Availability Testing, Reliability Testing, Resilience Testing, Data Privacy Testing, Cross-Browser and Cross-Platform Testing, Localization and Internationalization Testing, Backup and Recovery Testing, and more. Non-functional testing makes sure the user will obtain a well-rounded experience by addressing areas like performance, security, usability, and compliance, making the HR management system robust and dependable.

4. Test Approach

4.1 TEST DESIGN APPROACH

Black-Box Testing:

Black-box testing will be used to test the HR management system's functionality and also non-functional areas. It will be tested from a user perspective, by focusing on tasks like login, employee profile access, leave and attendance management, and timesheet processing.

Acceptance Testing (UAT):

User acceptance testing (UAT) involves HR professionals who will evaluate the HR system's usability and alignment with their real-world needs, by making sure it meets their specific requirements.

Performance Testing:




Performance testing, including load testing and stress testing, will confirm the ability of the system to handle expected and peak loads, making sure it will perform well and be responsive under various conditions.

Security Testing:





Security testing, using techniques like vulnerability scanning and penetration testing, will identify and address potential vulnerabilities. This will safeguard sensitive HR data and ensure the application's security.

4.2 EXECUTION STRATEGY

4.3.1 Entry Criteria

Entry Criteria	Conditions	Comments
<i>Test environment(s) is available</i>		
<i>Test data is available</i>		
<i>Code has been merged successfully</i>		
<i>Development has completed unit testing</i>		
<i>Test cases and scripts are completed, reviewed and approved by the Project Team</i>		

3.2.2 Exit criteria

Exit Criteria	Conditions	Comments
<i>100% Test Scripts executed</i>		
<i>90% pass rate of Test Scripts</i>		
<i>No open Critical and High severity defects</i>		
<i>All remaining defects are either cancelled or documented as Change Requests for a future release</i>		
<i>All expected and actual results are captured and documented with the test script</i>		
<i>All test metrics collected based on reports from daily and Weekly Status reports</i>		
<i>All defects logged in -Defect Tracker/Spreadsheet</i>		
<i>Test environment cleanup completed and a new back up of the environment</i>		

3.3 DEFECT MANAGEMENT

Severity	Impact
<i>1 (Critical)</i>	<ul style="list-style-type: none">▪ <i>Functionality is blocked and no testing can proceed</i>▪ <i>Application/program/feature is unusable in the current state</i>
<i>2 (High)</i>	<ul style="list-style-type: none">▪ <i>Functionality is not usable and there is no workaround but testing can proceed</i>
<i>3 (Medium)</i>	<ul style="list-style-type: none">▪ <i>Functionality issues but there is a workaround for achieving the desired functionality</i>
<i>4 (Low)</i>	<ul style="list-style-type: none">▪ <i>Unclear error message or cosmetic error which has minimum impact on product use.</i>

5. Test Team Structure

5.1 TEAM STRUCTURE

#	Role	Resource Count
1	QA Manager	1
2	QA Leads	1
3	Senior QA Engineers	1
4	QA Engineers	2

5.2 ROLES AND RESPONSIBILITIES

QA Manager:

The QA Manager is responsible for defining the overall testing strategy for the HR application, ensuring that testing aligns with HR-specific requirements, and managing the testing team to meet HR system goals and quality standards.

QA Leads:

QA Leads supervise the HR application testing efforts, this includes, the creation of test plans specific to HR functionalities, assigning test cases to QA engineers, and ensuring that testing activities focus on HR-related use cases and requirements.

Senior QA Engineers:

Senior QA Engineers are responsible for designing and executing complex test scenarios that relate to HR tasks, such as leave management and timesheet approval. They play a major role in identifying HR application-specific defects and mentoring junior team members in HR-specific testing methodologies.

QA Engineers:

QA Engineers execute test cases relevant to the HR application, document HR-specific defects, participate in the creation of test scenarios related to HR functionality, and collaborate with the team to ensure thorough testing and quality assurance of HR management features.

6. Test Schedule

Phase	Duration
<i>Test Planning</i>	1 Week
<i>Test Environment Setup</i>	1 Week
<i>Test Case Design</i>	1 Week
<i>Functional Testing</i>	2 Week
<i>Non-Functional Testing</i>	3 Week
<i>User Acceptance Testing (UAT)</i>	1 Week
<i>Defect Resolution and Re-Testing:</i>	2 Week
<i>Final Test Report and Test Closure</i>	1 Week

7. Test Reporting

7.1. TEST REPORTING APPROACH

#	Report Name	Owner	Audience	Frequency
1	TEST PROGRESS REPORT	QA Lead	QA Team, Dev Team, Project Manager	Daily
2	TEST SUMMARY REPORT	QA Manager	QA Team, Dev Team, Clients	End of Test Phases

7.2. QUALITY MATRICES

- *Defect Density*
- *Test Coverage*
- *Pass/Fail Ratios*
- *Response Time*
- *Defect Severity Levels*

8. Test Environment Requirements

- Include current and confidential HR data in the test environment.
- Match software versions and configurations with the production environment.
- Having dedicated servers for hosting the HR Management application to ensure a stable and

isolated testing environment.

- Workstations for testing equipped with various browsers and operating systems to validate cross-browser compatibility.

9. Dependencies and Assumptions

Dependencies:

- The availability of accurate and representative test data, such as employee records and leave history, is important for effective testing.
- The readiness and stable nature of the test environment, including the availability of hardware, software, and configurations mirroring the production environment.
- Enough allocation of resources, including testing personnel, tools, and infrastructure, is essential to ensure the timely and effective execution of the testing process.

Assumptions:

- *The development of the HR management application will be completed according to the defined schedule, allowing for testing to continue as planned.*
- *The HR system has been designed and arranged to comply with data privacy regulations, ensuring the confidentiality and security of HR data.*
- *Successful testing assumes that stakeholders, including HR professionals and system users, will actively participate in the testing process, provide feedback, and report issues.*