Test Estimation Report

1. Introduction

This document provides an estimation of testing effort, resources, and timelines for the upcoming release of the web application. The estimation covers both **Functional** and **Non-Functional Testing** activities. It also highlights assumptions, risks, and dependencies considered during estimation.

2. Objectives

- Provide effort and resource estimates for Functional and Non-Functional testing.
- Define the scope and assumptions for estimation.
- Identify risks and mitigation plans related to testing effort.
- Establish a baseline for test planning and execution.

3. Scope of Testing

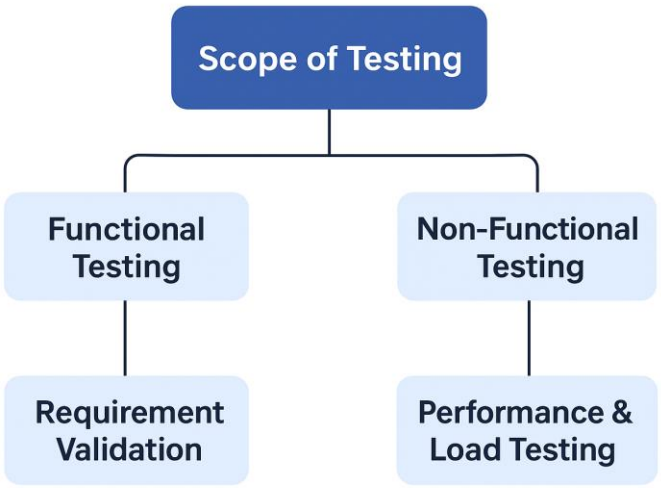
3.1 Functional Testing

- Requirement Validation
- Test Case Design & Review
- Functional Test Execution
- Regression Testing
- Defect Reporting & Retesting

3.2 Non-Functional Testing

- Performance & Load Testing

- Security Testing
- Compatibility (Cross-Browser & Device) Testing
- Usability Testing
- Accessibility Testing



4. Estimation Approach

The following methods were used:

- **Work Breakdown Structure (WBS)** – breaking down into granular tasks.
- **Historical Data** – based on past project velocity & defect density.
- **Three-Point Estimation (PERT Formula)** – for uncertain activities.
- **Expert Judgment** – input from QA leads and SMEs.

5. Estimation Breakdown

5.1 Functional Testing Estimation

Activity	Effort (Person-Days)	Assumptions

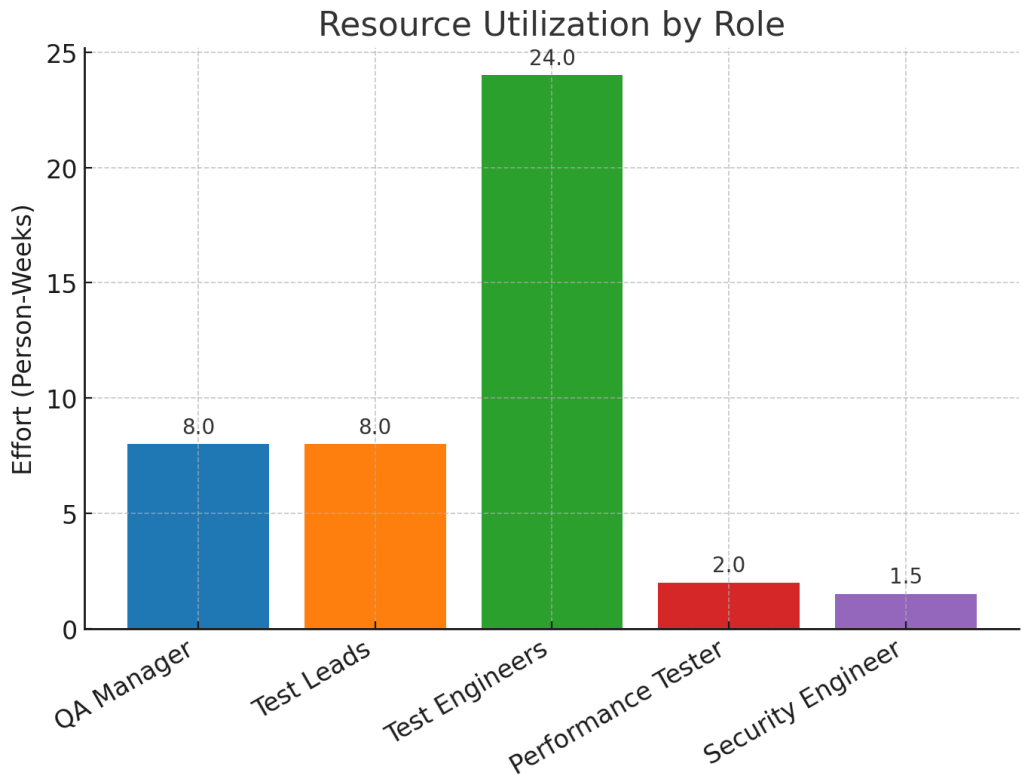
Requirement Analysis	5	All requirements are documented & reviewed.
Test Case Preparation	10	~200 test cases to be written.
Test Case Review	3	Peer review for coverage & quality.
Test Execution	15	Includes multiple cycles & retesting.
Defect Reporting & Closure	5	Avg. 30 defects expected.
Regression Testing	7	Regression pack ~150 test cases.
Total	**45 Person-Days**	

5.2 Non-Functional Testing Estimation

Activity	Effort (Person-Days)	Assumptions
Performance & Load Testing	10	Using JMeter; 1,000 concurrent users.
Security Testing	8	Includes vulnerability scanning + manual pen tests.
Compatibility Testing	5	Across 3 browsers & 2 devices.
Usability Testing	3	Involves 5 business users for feedback.
Accessibility Testing	4	WCAG 2.1 compliance checks.
Total	**30 Person-Days**	

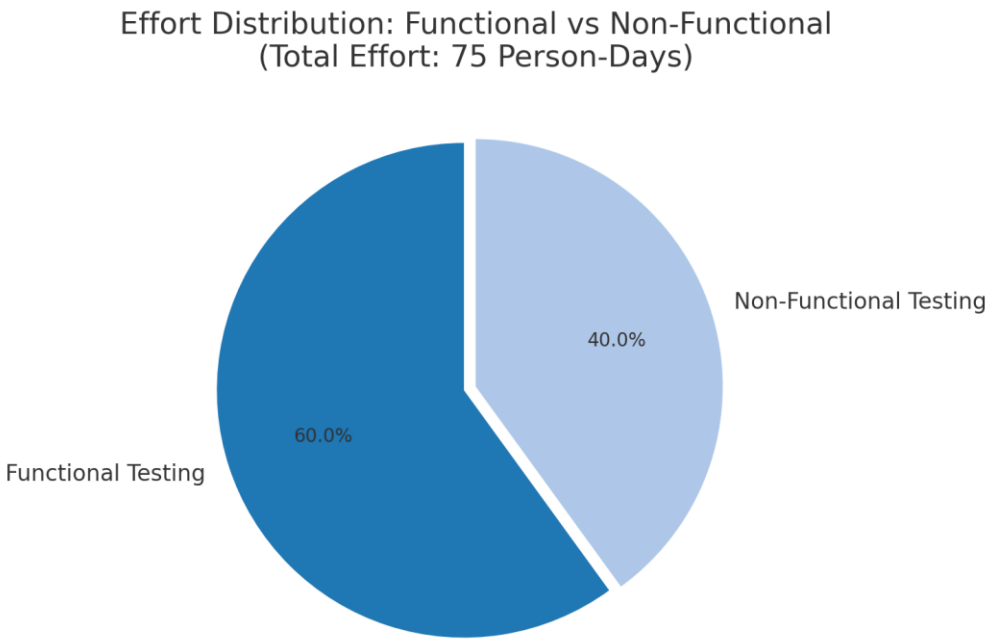
6. Resource Plan

Role	Count	Duration	Effort Allocation
QA Manager	1	Full cycle	Oversight, reporting, sign-off
Test Leads	1	Full cycle	Planning, reviews, defect triage
Test Engineers	3	Full cycle	Execution of functional test cases
Performance Tester	1	2 weeks	Performance & load testing
Security Engineer	1	1.5 weeks	Security assessment



7. Effort Summary

- **Functional Testing Effort:** 45 Person-Days
- **Non-Functional Testing Effort:** 30 Person-Days
- **Total QA Effort:** 75 Person-Days



8. Assumptions

- Requirements are signed off and stable.
- Test environments will be available as per schedule.
- Test data will be prepared by the development/business team.
- All third-party integrations are stable.
- No major scope changes post-estimation.

9. Risks & Mitigation

Risk	Impact	Mitigation
Delayed environment readiness	High	Request early provisioning; fallback to lower env.
Scope creep in requirements	Medium	Re-baseline estimation after CR approval.
Limited performance testing window	High	Early performance testing cycles; monitoring post go-live.
Test data unavailability	Medium	Use synthetic data generation tools.

10. Conclusion & Recommendation

Based on the estimation approach and breakdown, a total of **75 Person-Days** effort is required to complete both Functional and Non-Functional testing activities. Adequate resource allocation, stable environments, and timely data availability are critical for meeting this estimation.

Prepared By:
QA Manager – _____
Date – _____