Quality Assurance (QA) Career Roadmap

Introduction

This document outlines a structured roadmap for individuals aspiring to build a career in Quality Assurance (QA). It covers the essential skills, tools, and practical experience required at each stage, from beginner to advanced level.

Phase 1: QA Foundations

- Understanding Software Development Life Cycle (SDLC) and Software Testing Life Cycle (STLC)
- Fundamentals of manual testing and testing principles
- Types of testing (Smoke, Sanity, Regression, Functional, Non-functional)
- Test case design, defect life cycle, severity vs priority
- Basic tools: Excel/Google Sheets, Jira

Phase 2: Manual QA and Real Project Practice

- Requirement analysis and understanding business requirements
- Writing professional test cases and test scenarios
- Creating test plans and test strategies
- Manual test execution and regression testing
- Defect identification and reporting using Jira
- Agile and Scrum methodology participation
- Exploratory testing and usability testing

Phase 3: Automation Testing Basics

- Learning programming fundamentals using Java or Python
- Object-Oriented Programming (OOP) concepts
- Selenium WebDriver basics and locators
- Test frameworks (TestNG or PyTest)
- Version control using Git and GitHub
- Basic automation framework structure

Phase 4: Advanced QA Skills

- API testing using Postman and automation tools
- Database testing and basic SQL queries
- Continuous Integration and Continuous Deployment (CI/CD)
- Performance testing fundamentals
- Security testing basics

Entering the Real World

Candidates are encouraged to begin real-world exposure during Phase 2 by applying for internships, trainee roles, or freelance testing opportunities. Automation-focused roles can be pursued after completing Phase 3.