Manual Testing at CSDT Centre Patna

Course Duration: 2 days   **Course Fee: Rs 8500/-**

About CSDT Centre Patna

CSDT Centre Patna is a leading training institute in Patna, dedicated to providing high-quality IT education and training. The institute offers a range of courses designed to prepare students for successful careers in the technology industry.

Manual Testing Course Syllabus Overview

The Manual Testing course at CSDT Centre Patna is crafted to provide students with a comprehensive understanding of software testing methodologies, techniques, and tools. The course aims to equip students with the practical skills needed to excel in the field of software quality assurance.

Course Modules or Manual Testing Syllabus

1. **Introduction to Software Testing**
   - Fundamentals of Software Testing
   - Importance of Testing in Software Development Life Cycle (SDLC)
   - Manual vs. Automation Testing
   - Testing Principles and Objectives
2. **Software Development Life Cycle (SDLC)**
   - SDLC Models: Waterfall, Agile, V-Model, Spiral, etc.
   - Role of Testing in Different SDLC Models
   - Software Testing Life Cycle (STLC)
3. **Types of Testing**
   - Functional Testing
   - Non-Functional Testing
   - Regression Testing
   - Smoke and Sanity Testing
   - Integration Testing
   - System Testing
   - User Acceptance Testing (UAT)
   - Alpha and Beta Testing
4. **Test Planning and Documentation**
   - Test Planning: Objectives, Scope, Strategy, and Approach
   - Test Case Design and Development
   - Test Scenarios and Test Scripts
   - Test Data Preparation
   - Test Environment Setup
5. **Test Execution and Reporting**
   - Test Execution Process
   - Logging Defects and Tracking
   - Defect Life Cycle
   - Tools for Defect Management (JIRA, Bugzilla, etc.)
   - Test Reporting: Metrics and KPIs
6. **Test Techniques and Design**

- o Static and Dynamic Techniques
- o Black Box Testing: Equivalence Partitioning, Boundary Value Analysis, Decision Table Testing, State Transition Testing
- o White Box Testing: Statement Coverage, Branch Coverage, Path Coverage
- o Exploratory Testing
- o Ad-hoc Testing

7. **Non-Functional Testing**
   - o Performance Testing: Load, Stress, Volume, and Scalability Testing
   - o Security Testing: Vulnerability Assessment, Penetration Testing
   - o Usability Testing
   - o Compatibility Testing

8. **Specialized Testing**
   - o Mobile Testing
   - o Web Application Testing
   - o API Testing
   - o Database Testing

9. **Tools for Manual Testing**
   - o Test Management Tools (HP ALM, TestRail, etc.)
   - o Defect Tracking Tools (JIRA, Bugzilla)
   - o Basics of SQL for Database Testing

10. **Best Practices in Manual Testing**
    - o Writing Effective Test Cases
    - o Test Case Review Process
    - o Test Optimization Techniques
    - o Maintaining Test Artifacts
    - o Continuous Learning and Keeping Up with Industry Trends

11. **Project Work**
    - o Real-World Testing Scenarios
    - o End-to-End Testing of a Sample Application
    - o Creating Comprehensive Test Documentation
    - o Defect Logging and Reporting
    - o Final Project Presentation and Review

Career in Manual Testing

Job Roles in Manual Testing

1. **Manual Tester / QA Analyst:**
   - o Writing and executing test cases
   - o Identifying and documenting defects
   - o Verifying fixes and performing regression testing

2. **Senior QA Analyst:**
   - o Designing complex test scenarios
   - o Leading test execution efforts
   - o Mentoring junior testers

3. **Test Lead / Test Manager:**
   - o Managing the testing team
   - o Defining testing strategies and plans
   - o Coordinating with stakeholders

4. **QA Consultant:**

- o Providing expert advice on testing processes and tools
- o Implementing best practices in testing
- o Conducting training sessions for teams
5. **Quality Assurance Manager:**
   - o Overseeing all testing activities
   - o Ensuring adherence to quality standards
   - o Managing test planning, execution, and reporting

Skills Required for Manual Testing

- **Attention to Detail:** Ability to identify subtle defects and inconsistencies.
- **Analytical Skills:** Strong problem-solving and critical thinking abilities.
- **Communication Skills:** Effective written and verbal communication for reporting defects and collaborating with team members.
- **Technical Knowledge:** Basic understanding of software development, databases, and testing tools.
- **Documentation Skills:** Proficiency in creating comprehensive test cases, test plans, and defect reports.

Career Growth and Opportunities

- **Starting Point:** Entry-level positions such as Junior QA Tester or Manual Tester.
- **Mid-Level:** With experience, progress to Senior QA Analyst, Test Lead, or Test Manager roles.
- **Advanced Level:** Opportunities to become QA Consultants, Quality Assurance Managers, or even Test Architects.
- **Specialization:** Diversify into specialized testing areas like mobile testing, security testing, performance testing, or automation testing.

Industries and Demand

Manual testers are in demand across various industries, including:

- **Information Technology and Services**
- **Finance and Banking**
- **Healthcare**
- **Telecommunications**
- **E-commerce and Retail**

Future Trends in Manual Testing

- **Agile and DevOps:** Increasing emphasis on Agile methodologies and DevOps practices.
- **Shift-Left Testing:** Early involvement of testers in the development process.
- **Test Automation:** Complementing manual testing with automation for better efficiency and coverage.
- **AI in Testing:** Emerging use of AI and machine learning to enhance testing processes.

CSDT Centre Patna offers an excellent Manual Testing course that equips students with the necessary skills and knowledge to excel in the field of software quality assurance. With a focus on practical training and industry relevance, the course is designed to open up numerous career opportunities in the ever-growing tech industry.