



SOFTWARE TESTING & QUALITY ASSURANCE

Programming & development

Course Curriculum

Basic – 30 Hours



SOFTWARE TESTING AND QUALITY ASSURANCE

Module 1 : Introduction to Software Testing

- Basic of software testing
- Software development model
- Definition of Bug

Module 2 : Fundamentals of Software Testing

- Testing strategies and techniques
- Structural and Functional testing

Module 3 : Software Quality Assurance

- Definition of Quality
- Test Management and Organizational Structure



POSITIVE QUADRANT
TECHNOLOGIES
SERVING INFORMATION WORLDWIDE

Module 4 : Testing Techniques

- White Box Testing
- Black Box Testing

Module 5 : Testing Levels

- Unit testing
- Integration testing
- System testing

Module 6 : Test Documentation

- Test data preparation
- Test cases and test scenarios



Module 7 : Security Testing

- Security testing
- Security scenarios

Module 8 : Defect Life Cycle

- Basics of defect identification and logging
- Defect tracking and reporting

Module 9 : Tools and Automation

- Introduction to testing tools
- Basic manual testing skills

Module 10 : Advanced Testing Techniques

- Grey box testing
- Boundary value analysis
- Decision table testing
- State transition testing



Module 11 : Testing Types

- Manual vs. automated testing
- Performance testing
- Usability testing

Module 12 : Testing Tools

- Benefits of Automation testing
- Random Testing
- Bug Bashes and Beta Testing
- Basic scripting for automated tests



Module 13: Test Planning

- Test cases
- Bug life Cycle
- Test strategy

Module 14: Defect Life Cycle

- Defect life cycle stages
- Defect metrics and analysis

Module 15: Quality Assurance

- QA processes and methodologies
- Introduction to continuous integration

Module 16: Testing Types (Advanced)

- Compatibility testing
- Accessibility testing
- User acceptance testing (UAT)

Module 17: Tools and Automation (Advanced)

- Performance testing tools
- Test management tools
- Advanced scripting for automation

Module 18: Quality Assurance (Advanced)

- Software quality assurance metrics
- Quality Management in IT.

Module 19: Metrics and Measurement



- Test efficiency and effectiveness
- Process improvement metrics

Module 20: Organizational Structure

- CMM (Capability Maturity Model)
- Basic of CMM

Module 21: Case Studies

- Real world case studies
- Complex hands-on projects

