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PROFESSIONAL

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IT TRAINING HANDBOOK

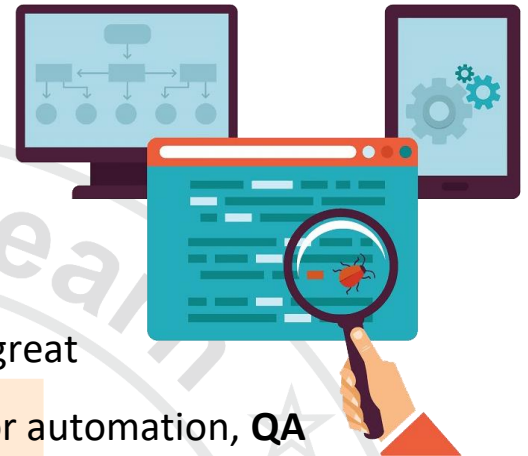## SOFTWARE TESTING-QA (MANUAL AND AUTOMATION) CERTIFICATION COURSE

Software Testing-QA Manual and Automation Certification Course

"Master the Art of Quality Assurance – Manual and Automation Testing!"

In today's software-driven world, delivering high-quality products is paramount. Software testing ensures that applications function seamlessly, are free from bugs, and provide a great user experience. Whether it's manual testing or automation, **QA (Quality Assurance)** plays a crucial role in achieving software reliability.

Our **Software Testing-QA Manual and Automation Certification Course** prepares you to become a proficient QA engineer. With a balanced mix of manual testing techniques and automation practices, this course covers the entire testing lifecycle, from planning to execution, ensuring you're job-ready to tackle the demands of the QA industry.
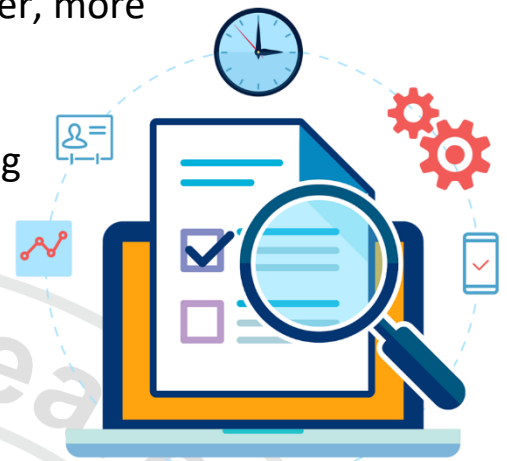
Why Software Testing Matters?

Quality assurance ensures that software meets the highest standards before reaching the end user. Here's why testing is crucial in software development:

- **Bug-Free Products**: QA ensures that bugs are caught early, reducing costly fixes and improving product quality.

- **Enhanced User Experience**: Proper testing helps identify issues that affect user interaction, ensuring a smoother, more intuitive experience.

- **Faster Time to Market**: Automation testing speeds up the testing process, allowing faster releases and better productivity.

- **Career Growth**: QA testing is one of the fastest-growing fields in IT with opportunities to work in multiple industries such as tech, finance, healthcare, and retail.

What Will You Learn?

Our comprehensive **Software Testing-QA Manual and Automation Certification Course** covers both **manual** and **automation testing**, giving you a complete skillset for the QA field.

1. Introduction to Software Testing

- Understand the software testing life cycle (STLC) and different testing methodologies.

- Explore the **types of software testing**: functional vs. non-functional testing, manual vs. automation testing, etc.

- Learn about **testing principles** and how to approach testing in a structured and efficient manner.

2. Manual Testing Techniques

- Understand the core concepts of **manual testing**: test planning, test case design, test execution, and defect reporting.

- Explore different **manual testing types**: black box testing, white box testing, system testing, acceptance testing, etc.

- Learn how to work with test management tools like **TestRail** and **JIRA** to track and manage test cases, bugs, and reports.

3. Functional Testing

- Master **functional testing** techniques: testing an application's functionality against requirements.

- Learn how to write and execute **test cases** to ensure each feature of the application works as expected.

- Understand **boundary value analysis** and **equivalence partitioning** to create effective test cases.

4. Non-Functional Testing

- Dive into **non-functional testing**: performance testing, load testing, security testing, and usability testing.

- Learn to use tools like **JMeter** for performance and load

testing to assess the application's scalability and performance under load.

- Understand the **importance of security testing** to ensure the application's robustness against vulnerabilities.

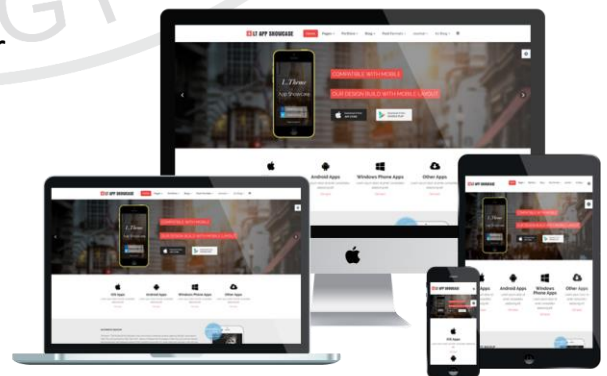## 5. Introduction to Automation Testing

- Learn the fundamentals of **test automation** and when it's appropriate to use automation over manual testing.

- Understand the advantages and challenges of automation in terms of speed, reliability, and maintainability.

- Explore the popular **test automation tools**: **Selenium**, **Appium**, **TestNG**, **JUnit**, **Cucumber**, etc.

6. Selenium Automation Testing

- Learn **Selenium WebDriver**, one of the most widely-used tools for automating web applications.

- Master writing **automated test scripts** in **Java** or **Python** for browser testing.

- Understand **cross-browser testing**, handling dynamic web elements, and integrating Selenium with other testing frameworks.

7. Test Automation Frameworks

- Learn how to create and work with various **test automation**

frameworks such as **Data-Driven Framework**, **Keyword-Driven Framework**, and **Hybrid Framework**.

- Understand how to use **JUnit**, **TestNG**, and **Cucumber** to build robust test automation frameworks.

- Explore **CI/CD integration** with tools like **Jenkins** for continuous testing and deployment.

8. Advanced Automation Concepts

- Master **advanced automation** topics: handling dynamic elements, integrating with databases, working with APIs, and automating mobile apps.

- Learn to automate **API testing** with tools like **Postman** and **SoapUI**.

- Understand **test reporting** and **logs** to analyze the results of automation testing and ensure they meet the required standards.
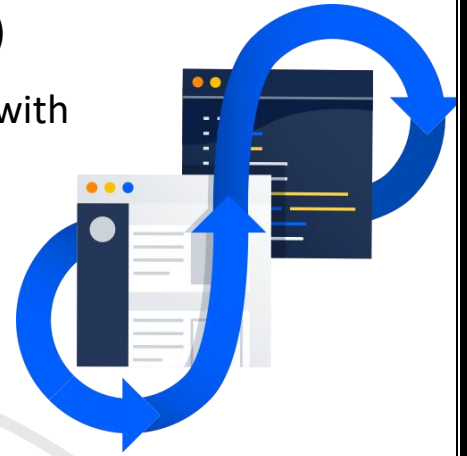
9. Mobile Testing Automation

- Learn about **mobile application testing** on both Android and iOS platforms.

- Understand the use of **Appium** and **Selendroid** for mobile test automation.

- Explore mobile-specific testing challenges like device fragmentation, OS compatibility, and performance.

10. Continuous Integration and Deployment (CI/CD)

- Understand how to integrate automated tests with **CI/CD pipelines** using **Jenkins**, **Git**, and **Docker**.

- Learn how to execute automated tests in real-time as part of the continuous delivery process to ensure quick releases without compromising quality.

11. Test Reporting and Analysis

- Understand how to interpret test results, generate test reports, and perform detailed test analysis.

- Learn to use tools like **Allure** and **ExtentReports** for detailed test execution reports.

- Analyze the results to identify critical issues and take corrective actions accordingly.
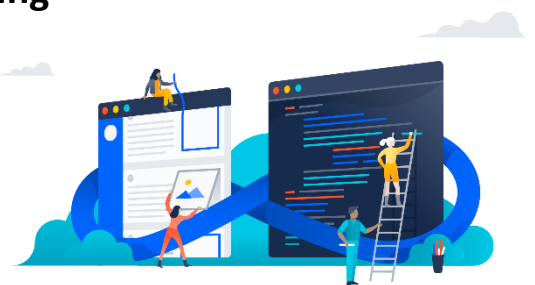
12. Preparing for Software Testing Certifications

- Get guidance on how to prepare for industry-recognized software testing certifications such as **ISTQB**, **Certified Software Tester (CSTE)**, and **Certified Selenium Tester**.

Course Modules

1. **Module 1: Introduction to Software Testing**
2. **Module 2: Manual Testing Techniques**
3. **Module 3: Functional Testing**
4. **Module 4: Non-Functional Testing**

5. **Module 5: Introduction to Automation Testing**

6. **Module 6: Selenium Automation Testing**

7. **Module 7: Test Automation Frameworks**

8. **Module 8: Advanced Automation Concepts**

9. **Module 9: Mobile Testing Automation**

10. **Module 10: Continuous Integration and Deployment (CI/CD)**

11. **Module 11: Test Reporting and Analysis**

12. **Module 12: Preparing for Software Testing Certifications**

Course Highlights

- **Comprehensive Coverage**: Master both **manual and automation testing** with a hands-on, practical approach.

- **Expert Trainers**: Learn from highly experienced instructors with years of industry knowledge.

- **Real-World Projects**: Apply your learning on real-world projects to strengthen your portfolio.

- **Job-Ready Skills**: Gain the skills and experience necessary to work as a professional QA Engineer in manual and automated testing environments.

- **Industry Tools**: Learn the industry's top testing tools and frameworks used by leading companies globally.

- **24/7 Access**: Study at your own pace with round-the-clock access to course materials, practice tests, and resources.

- **Official Certification**: Upon completion, receive a **Certification in Software Testing-QA Manual and Automation** to validate your expertise.

📇 Course Format

Format Detail	Description
Duration	3 Months Training + 1 Month Practice
Learning Approach	30% Theory + 70% Practical
Assessment	90-minute certification exam with 60 MCQs
Passing Score	70%
Certification Criteria	Successful project submission + exam pass

Why Choose TECHELEARN?

- **Industry-Driven Curriculum**: Stay ahead of the curve with a curriculum designed by experts and aligned with the latest industry trends.

- **Practical Learning**: Work on hands-on projects that simulate real-world scenarios, helping you build experience before entering the job market.

- **Lifetime Access**: Enjoy lifetime access to course updates, materials, and practice tests, ensuring you stay current in the ever-evolving field of software testing.

- **Global Recognition**: Be part of a globally recognized training platform that provides certification respected by top employers.

- **Career Assistance**: Receive career support, including job placements, interview preparation, and resume building.

Who Should Take This Course?

- **Aspiring QA Engineers**: Learn the full spectrum of software testing, from manual testing to automation, to start your career in QA.

- **Manual Testers**: Expand your skills by adding automation testing to your portfolio, making you more valuable in the job market.

- **Automation Testers**: Enhance your automation skills and learn advanced testing tools and techniques to further your career.

- **Software Developers**: Gain knowledge of testing methodologies and improve your understanding of software quality from a developer's perspective.

- **Professionals Looking to Transition to QA**: If you have experience in other areas of IT and wish to transition into software testing, this course will equip you with the essential skills.
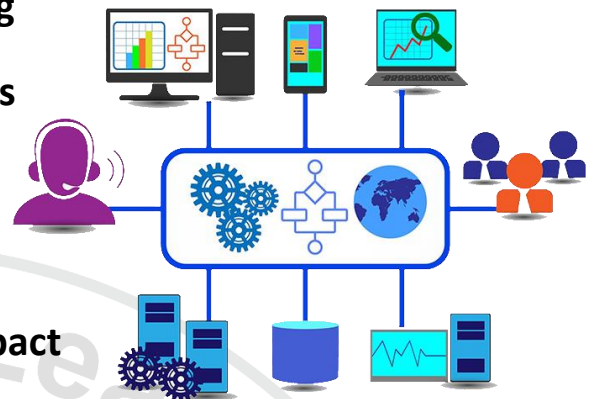
👦🏫 Training Modes

- 🏢 **Live Instructor-Led Online Training**

- 🖥 **Self-Paced Learning + Assignments**

- 👦💼 **Corporate On-Demand Training Workshops**

- 🔁 **Hybrid Model for Flexibility & Impact**

📂 Includes: Source Code, Assignments, Quizzes, Final Capstone Project & Certificate Exam

🎁 Bonus Add-ons

✔ Portfolio Setup

✔ Resume & LinkedIn Optimization

✔ Interview Preparation Sessions

✔ Lifetime Access to Developer Community

🌐 Partner with TECHELEARN – Upskill Your Team

TECHELEARN offers customized **QA** training for businesses.

📌 **Talk to Our Enterprise Team**

📌 **Request a Tailored Group Training Plan**

🎯 Get Started Journey Today

Join **11,000+** learners who trust **TECHELEARN** for career-ready skills.

🔥 QA skills are in high demand. Don't just learn—

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- *Collaborate with Us: We partner with educational institutions, businesses, and experts to offer training that meets industry needs.*

💡 **JOIN US IN THIS EXCITING JOURNEY!**

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