IT Expert
TECHNOLOGY

SOFTWARE TESTING

(COMPLETE COURSE)

NOW YOU CAN CODE

100% PLACEMENT

OVERVIEW

Software testing is the process of evaluating and verifying that a software product or application does what it is supposed to do. The benefits of testing include preventing bugs, reducing development costs and improving performance.

WHAT YOU WILL LEARN

* Understanding what is Software testing ?
* Clear understanding on how Software Projects are handled in real time with Live Project examples
* Clear understanding of different Software Testing methodologies with Manual testing tools
* Complete knowledge on Bug life cycle and different SDLC
* Clear Understand about JIRA tools from Scratch with Live project demonstration
* Complete knowledge on QA Testing process starting from getting the requirement to Project delivery
* Clear Understand about Test Case and Test scenario Preparation with Live project example
* QA Growths and future Scope and guided how to grow in QA
* Covered different types of testing and it's uses
* Given QA Best Practice and Interview question at the end of each section to master the learning processes
* Easy explanation with multiple diagrams and Images for easy understanding

MANUAL TEST PROCESS:

* Understanding & Analyzing Test Requirements.
* Creating RTM (Requirement Traceability Matrics) Document
* Test Plan Documentation
* Test Case Development & Test Data Collection
* Updating Requirement Traceability Matrices
* Test Environment Setup & Smoke Testing
* Execute Basic Functionality Test Cases (Sanity Testing)
* Execute All Possible Test Cases (Comprehensive Testing)
* Defect Reporting & Tracking.
* Accepting Modified Build by Conducting sanity Testing
* Execute Re and Regression Test cases Cycle-1
* Defect Reporting & Tracking.
* Accepting Modified Build by Conducting sanity Testing
* Execute Re and Regression Test cases Cycle-2
* Defect Reporting & Tracking.
* Final Regression.
* Evaluate Exit Criteria and Send Test Deliverables.
* Software Test Summary Report & Test Closure.

MODULE 1:

Software Testing Introduction

In this module you learn about Importance of testing. Why Testers need industry, software program/application/product: meets the business and technical requirements that guided its design and development works as expected.

* What is testing?
* Importance of testing
* Manual Testing Process
* Roles and Responsibilities
* Principles of software testing
* How to conduct Software testing.
* How much testing is enough?
* What is Quality?
* Differences between Manual and Automation

MODULE 2:

Software Development Life Cycle

In this module you learn about development procedure .SDLC stands for Software development life cycle. It is a process that describes how to develop, design and maintain the software project ensuring that all the functional & user requirements, goals and objectives are met.

1. SDLC Phases
* Requirements Phase
* Analysis Phase
* Design phase
* Coding Phase
* Testing phase
* Delivery/Release and Maintenance Phase.

MODULE 2:

2. Software Development Life Cycle Models
* Waterfall Model
* Prototype Model
* Spiral Model
* V Model
* Agile Model

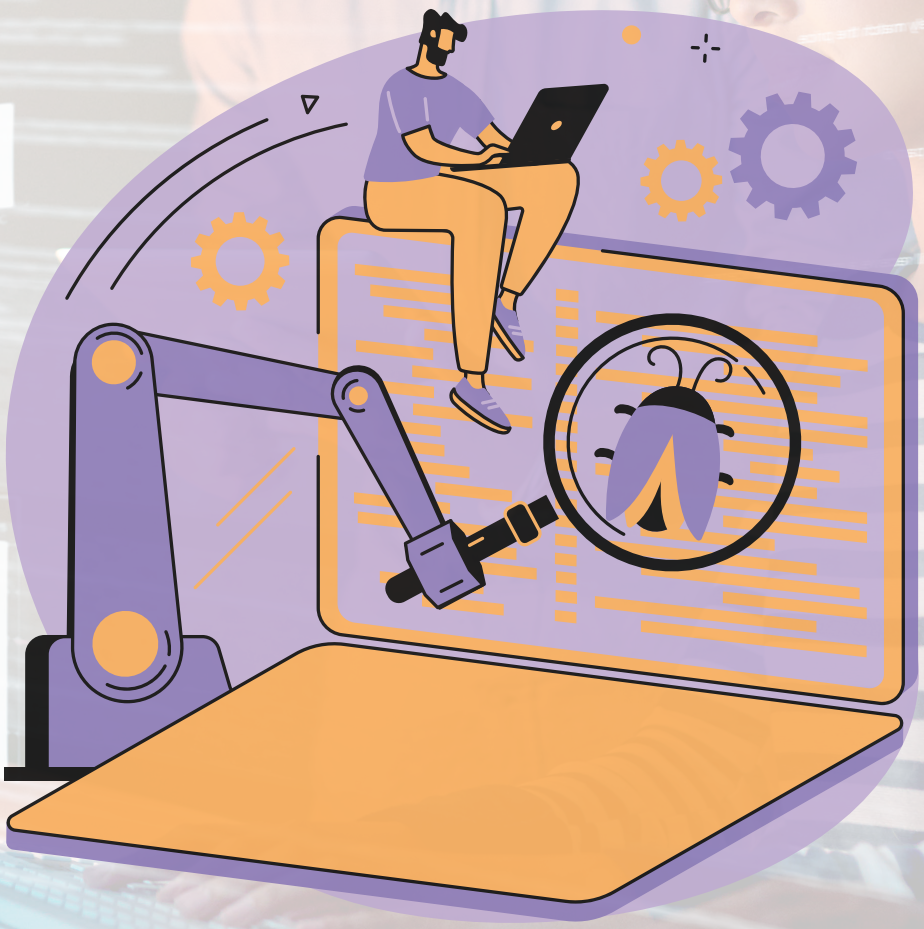
Agile Methodology
* Agile Methodologies
* Overview
* Agile Scrum
* Agile ceremonies
* Agile artifacts

Agile Scrum
* Why do we go for Agile?
* Agile Manifestos and Scrum
* Roles involved in Agile
* Terminologies used in Agile
* Agile Interview Questions

MODULE 3:

In this module you learn about different types of software testing. Software Testing Methodology is defined as strategies and testing types used to certify that the application under test meets client expectations

* White Box Testing
* Black Box Testing
* Grey Box Testing.



MODULE 4:

Test Case Design Techniques

In this module you learn to design test cases in such a way that we get the maximum coverage using an optimal set of Test cases. Focus on highlighting the various Methods and Techniques in designing test cases for both Black Box Testingand White Box testing.

Static Techniques:

* Informal Reviews
* Walkthroughs
* Technical Reviews
* Inspection

Structural Techniques

Statement Coverage Testing

* Path Coverage Testing
* Conditional Coverage Testing
* Loop Coverage Testing

Black Box Techniques

* Boundary Value Analysis
* Equivalence Class Partition
* State Transition Technique
* Cause Effective
* Graph Decision Table
* Use Case Testing

Experienced Based Techniques

* Error guessing
* Exploratory testing
* Checklist-based Testing

MODULE 5:

TeLevels of Testing

In this module you learn about levels of testing are frequently grouped by where they are added in the software development process, or by the level of specificity of the test.

* Unit Testing
* Integration Testing
* System Testing
* Acceptance Testing

Types of Testing

1. Functional Testing
* Unit Testing
* Integration Testing
* System Testing
* User Acceptance Testing
* Sanity/Smoke Testing
* Regression Test. Retest
* And more....

MODULE 5:

2. Non Functional Testing

* Performance Testing
* Memory Test Scalability Testing
* Compatibility Testing
* Security Testing
* Cookies Testing
* Session Testing
* Recovery Testing
* Installation Testing
* Adhoc Testing
* Risk Based Testing
* I18N Testing
* L1ON Testing

MODULE 6:

Software Testing Life Cycle

In this module learn about in detail description of Test Life Cycle, importance of Test Plan roles and responsibilities of Test Manager, Test Lead, Test Engineer

1. Requirements Analysis/Design

* Understand the requirements
* Prepare Traceability Matrix

MODULE 6:

2. Test Planning

* Object
* Scope of Testing
* Schedule
* Approach
* Roles & Responsibilities
* Assumptions
* Risks & Mitigations
* Entry & Exit Criteria
* Test Automation
* Deliverables and more

3. Test Cases Design

* Derive Test Scenarios
* Write Test cases
* Review Test cases
* Test Cases Template
* Types of Test Cases
* Difference between Test Scenarios and Test Cases

4. Test Environment setup

* Understand the SRS
* Hardware and software requirements
* Test Data

MODULE 6:

5. Test Execution

* Execute test cases
* Defect Tracking and Reporting
o Types of Bugs
o Identifying the Bugs
o Bug/Defect Life Cycle
o Reporting the Bugs
o Severity and priority with real time examples

6. Test Closure

We create & use test documents before, during, and after Software Testing.

* Criteria for test closure
* Test Strategy
* Test Plan
* Requirement Traceability Matrix
* Test Scenarios
* Test Cases
* Test Data
* Test Metrics
* Defect Report
* Test summary report

MODULE 7:

QA & QC & Testing

In this module you learn about QA & QC and How to log bugs in Project management tools, how to give severity, priority to bugs.

* What is Quality Assurance?
* What is Quality Control?
* Differences of QA & QC & Testing

Test Management with Jira Tool (Learn & Implement)

* Introduction To JIRA Test Management In JIRA
* JIRA Agile
* Creating issue in Agile
* How to create an Epic in Agile
* Use of Clone and Link in JIRA
* Reports in JIRA
* Advanced Search And
* Introduction To JQL
* Generating Reports In JIRA
* Introduction To JIRA Agile
* Create an issue in JIRA
* Sub-Task
* Work Flows
* Plugins in JIRA
* JIRA Scrum Vs JIRA Kanban

MODULE 7:

Defect Tracking Tools with Jira Tool (Learn & Implement)

Database/ SQL

* SQL Basics & Syntax
* RDBMS Concepts & Database
* Data Types
* SQL Commands
* Operators
* Functions
* Subqueries
* Joins
* Views
* Important Queries

API Testing

* Client-Server Architecture
* Presentation, Business and Database layers
* What is an API?/ What is API Testing?
* Difference between API testing and Unit testing
* Web services->an introduction
* HTTP Structure
* xml and JSON->an overview
* URI and URL
* Tools for API Testing
* Approach of API Testing
* What to test for in API testing
* HTTP methods
* Status codes
* Example APIs

MODULE 7:

Interview Preparation

* Manual Testing Interview Q&A Discussion
* Real-Time Interview Q&A Discussion
* Agile Testing Interview Q&A Discussion
* JIRA Interview Q&A Discussion

Real-time Project involving most of the above concepts with following will be provided

* Product Abstract Document
* Requirement Specification Document
* Step-by-Step procedure for Testing the project from ground up
* Complete Test plan, Test Cases, Traceability, Defect tracking report documents

At the end of the course participants will be able to

* At the end of this course, candidates will be able to understand the complete cycle of Manual Testing.
* Candidates will be seeing the live project and will be able to start the career in the Software Quality Assurance field

CORE JAVA

Core Java

Setup Java Environment

* Download & Install Java (JDK) software
* Download & Install Eclipse IDE
* set Java environment variable path
* Java basic theory

Keywords and Syntax

variables, operators, and control flows

Different Data Types

Create Class, public class concepts

System.out.println( ); -> Examples and explanation

Comments

Basics of Java

* Local & Global Variables.
* Narrowing & Widening
* Basic methods
* Static and Non-static
* Method details with parameters & return types.
* Conditional statements:

o if - else

o switch case

Loop:

* for loop
* while loop
* do while loop
* Break and continue statements.

Array

String

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CORE JAVA

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String

Oops concepts:

* Encapsulation
* Constructors
* Inheritance
* Abstraction
* Polymorphism:

o Method overloading

o Method overriding

Type Casting:

* Up-casting and Down-casting
* Boxing and Unboxing (Wrapper classes)

Exception Handling & finally

Collections & Generics

HTML

* What is HTML
* Attribute name and attribute value
* Create HTML page

Selenium

Locators:

* xpath
* css selector
* id
* class name
* link text
* name
* tag name
* partial link

CORE JAVA

Selenium Setup

Web driver architecture

Basic commands:

* get( )
* click( )
* sendKeys( )
* getTitle( )
* getAttribute( )
* getCurrentUrl( )
* isDisplayed( )
* isEnabled( )
* isSelected( )

Select & Multi-select dropdowns

Implicit and Explicit wait

List <web Element>

Browser operation:

- ...navigate( ).to("...");
* ...navigate( ).refresh( );
* ...navigate( ).forward( );
* ...navigate( ).backward( );

CORE JAVA

Window Handling
Frames
Mouse Operations - Action class
Alerts
Handling tooltip
AutoIT
Sikuli
Excel operations
Properties file operations
TestNG
* Installation
* Annotations
* Groups (include, exclude)
* Parallel and cross browser testing
* Parameters
* Data provider
* POM with PageFactory concept

Dev ops, Maven Project Management Tool
Version Control Tool GITHUB
Continuous Integration Testing using Jenkins
Cucumber Framework

CONNECT WITH US

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