

TESTING (QA) BOOTCAMP

S No.	Tools	Module	Coverage
<u>01.a</u>		<u>ISTQB</u>	<p>1 Fundamentals of testing</p> <ul style="list-style-type: none">1 Why is testing necessary?2 What is testing?3 Testing principles4 Fundamental test process5 The psychology of testing <p>Practice Paper: Chapter 1</p> <p>2 Testing throughout the software life cycle</p> <ul style="list-style-type: none">1 Software development models –Sequential-waterfall, V model, Iterative-Spiral, Prototype, Rad, Incremental Waterfall <p>Agile, devops</p> <ul style="list-style-type: none">2 Test levels3 Test types: the targets of testing4 Maintenance testing <p>Practice Paper: Chapter 2</p>
<u>02.a</u>	Excel, SnappyTick	<u>ISTQB</u>	<p>Static techniques</p> <ul style="list-style-type: none">1 Reviews and the test process2 Review process3 Static analysis by tools ()Test Case writing <p>Practice Paper: Chapter 3</p> <p>4 Test design techniques</p> <ul style="list-style-type: none">1 Identifying test conditions and designing test cases2 Categories of test design techniques3 Specification-based or black-box techniques
<u>03.a</u>		<u>ISTQB</u>	<ul style="list-style-type: none">4 Structure-based or white-box techniques5 Experience-based techniques6 Choosing a test technique <p>Practice Paper: Chapter 4</p> <p>5 Test Management</p> <ul style="list-style-type: none">1 Test organization2 Test plans, estimates, and strategies3 Test progress monitoring and control and reporting4 Configuration management5 Risk and testing6 Incident management/Defect Management <p>Practice Paper: Chapter 5</p>

<p><u>01.2.</u> <u>3.b</u></p>		<p><u>ISTQB</u></p>	<p>6 Tool support for testing 1 Types of test tool 2 Effective use of tools: Potential benefits and risks 3 Introducing a tool into an organization Practice Paper: Chapter 6 7 Exercise: ISTQB Mock Test paper ISTQB Mock Test Paper Discussion</p>
<p><u>04.a</u></p>		<p><u>Test and Defect Management</u></p>	<p>Quality Centre Overview 1. Overview 2. Quality Center 3. JIRA & ADO Lab Session: Practice session on Jira & ADO along with QC. Tracking Defects</p>
<p><u>04.b</u></p>	<p><u>TFS, Test Manager/ Azure Devops</u></p>	<p><u>Test and Defect Management</u></p>	<p>Visual Studio TFS/Test Manager 1. TFS (Visual Studio 2010 Ultimate) 2. Pilot Project Lab Session: Lab Session: Creating Test Plan and Test Cases in TFS Tracking Defects with TFS Final Post Test Covering Entire Syllabus</p>
<p><u>05</u></p>	<p><u>JIRA</u></p>	<p><u>Agile</u></p>	<p><u>Testing on Agile Development</u> What is Agile Methodology Agile VS Waterfall Method Overview of Agile Testing/TDD/BDD/Automation Approach Scrum Extreme Programming Kanban / Lean Overview Agile Quiz</p>
<p><u>06</u></p>		<p><u>Automati on Testing &Advance topic</u></p>	<p><u>Overview</u> 1. What is Test Automation 2. Why Test Automation 3. Benefits & Challenges 4. Manual Testing Vs Test Automation 5. When to Automate 6. What to Automate 7. A typical Test Automation Process 8. Test Automation Tools <u>Advance Current Topics</u> 1. <u>AI-ML</u> 2. <u>Bots</u> 3. <u>CI CD/DevOps</u> 4. <u>RISK</u> Quiz related to deciding Proper candidates for Automation</p>

<u>07</u>	<u>Eclipse,</u>	<u>Automati on Testing- Selenium</u>	<u>Selenium</u> <ol style="list-style-type: none"> 1. Java Introduction – Classes, Methods, Operators, Variables, Control Flow Statements 2. Loops, Arrays and Functions 3. Object Oriented Programming and Concepts implementation 4. Packages, Access Modifiers/ Exception Handling 5. Collection API/Reflection API 6. String Manipulation, String Builder, File Handling, Log4j, /Handling XLS,XML files 7. Generic Types, Methods, Inheritance, Subtypes, Wildcards. <u>Lab Sessions on all java topics done in class</u> <u>Create program for generating Fabinocci series and Palindrome</u> <u>Create program to get the duplicate character from strings using Hash Map</u>
<u>08</u>	<u>TestNG, Maven, WebDiver jar files</u>	<u>Automati on Testing- Selenium</u>	<ol style="list-style-type: none"> 1. Automation Concepts, Automation Test Case Design 2. Types of Framework 3. Selenium WebDriver and cucumber 4. TestNg Framework 5. Usage of TestNG annotation (@Before, After, Dataprovider, GroupBy, Priority etc) with Selenium Test 6. Downloading WebDriver Jars and configuring in eclipse using Maven 7. Maven TestNg Integration 8. Drivers for Firefox, IE, chrome (include Headless), Iphone, Android <u>Lab Exercise:</u> <u>Creating and configuring Projects in Eclipse</u> <u>Using Selenium IDE</u>
<u>09</u>		<u>Automati on Testing- Selenium(Web testing)</u>	<ol style="list-style-type: none"> a. Close and Quit –Difference b. Importing webdriver documentation in eclipse c. WebDriver DesiredCapabilities Class d. Proxy settings with webdriver/Working with proxy Servers e. HTMLUnit driver and desired capabilities f. Use of collections in selenium g. Inspecting elements in Mozilla, Chrome and IE h. HTML language tags and attributes i. Various locator strategies j. WebDriver Interface <u>k.</u> WebElement Interface l. Identifying WebElements using id, name, class m. Finding Xpaths to identify n. Absolute and complete Xpaths o. Creating customized Xpaths without firebug p. Css Selectors q. Handling drop down list r. Select Class in Selenium API s. Managing radio buttons and Checkboxes t. Hidden components u. isDisplayed function

			<p>v. Taking Screenshots of the web pages</p> <p>w. How to Google out errors-Self sufficiency</p> <p>x.Implicit, Explicit and Fluent waits</p> <p>y. JavaScript Executor</p> <p>Lab Exercise: Creating Test Automation Project From Scratch Applying the selenium components learned on the sample project</p>
10		<u>Automati on Testing- Selenium</u>	<ol style="list-style-type: none"> 1. Webtables and css Selectors 2. Dynamic Xpaths/Objects Handling 3. Managing dynamic/unexpected popups 4. Navigtion Controls 5. TestNg and Hybrid (Keyword+Data) Framework <p>Lab Exercise: Creating Test Automation Framework using TestNG Creating a Data Driven Test</p>
11		<u>Automati on Testing- Selenium</u>	<ol style="list-style-type: none"> 1. Java DataBase Connectivity JDBC 2. DataBase Testing of Sample Web CRM Application 3. Applet Testing with Selenium 4. Working with ChromeDriver 5. IE Driver (for Internet Explorer) 6. Page Object Model(POM) <p>Lab Exercise: Creating Test Automation Project using POM Database Testing of Sample Application Creating Automation Test Reports</p>
12	<u>JavaScript/ NodeJs</u>	<u>Automati onTesting - Protractor , Jasmine, Cucumber</u>	<ol style="list-style-type: none"> 1. Protractor Automation Testing NodeJs framework overview and its set-up for windows environment 2. Protractor configuration, details of components listed in config.js, package.json and selenium/webdriver-manager 3. Javascript basics includes-variables, methods, callback, collections and error handling 4. Usage of "Describe" and "It" blocks <p>Lab Session: Creation of POM automation test framework using Jasmine Executing the Script using IDE and command line Creating Reports</p>
13	<u>Performan ce Testing Overview</u>	<u>Performa nce Testing</u>	<p>Overview</p> <ol style="list-style-type: none"> 1. What is Performance Testing? 2. Difference between Functional testing and Load testing 3. Where does Performance Testing occur? 4. Role of performance engineer 5. Types of Performance Testing (Load, Stress, Volume) 6. Examples for types of testing 7. Performance Testing Templates 8. Available Tools 9. Load runner installation and overview <p>Performance Testing Quiz</p>
14	<u>JMeter</u>	<u>Performa</u>	Jmeter

		<u>nce Testing-Jmeter</u>	<ol style="list-style-type: none"> 1. Introduction to JMeter 2. How to install JMeter in easy steps 3. Complete Element reference for JMeter 4. Hands on with JMeter GUI 5. Performance Testing using JMeter 6. How to use Timers in JMeter 7. How to use Assertions in Jmeter <p>Lab Session: Creating Load Test Script using JMeter Applying Assertions, timers</p>
<u>15</u>		<u>Perfomance Testing-Jmeter</u>	<ol style="list-style-type: none"> 1. How to use Controllers in Jmeter 2. How to use Processor in JMeter 3. How to perform Distributed Testing in JMeter 4. Best Practices for 'your JMeter Tests 5. How To Use JMeter for HTTP Proxy Server Testing <p>Lab Session: Distributed Testing using Jmeter Creating Jmeter reports</p>
<u>16</u>	<u>APPIUM</u>	<u>Mobile Testing</u>	<p>Mobile Testing Using Appium</p> <ol style="list-style-type: none"> 1. Introduction to Mobile application development 2. How Mobile App Testing is different than Desktop App Testing 3. Introduction to Mobile platforms 4. Introduction to Device fragmentation <p>Introduction to Mobile Test Automation Tools</p> <ol style="list-style-type: none"> 5. APPIUM Inspector 6. APPIUM Installation on Windows 7. APPIUM Test Case for Native Android App 8. Limitations using APPIUM 9. Best Practices in Mobile Testing <p>Lab Session: Creating an Mobile Automation Framework</p>
<u>17</u>	<u>AWS</u>	<u>Cloud Testing Basics</u>	<ul style="list-style-type: none"> • Overview of methodologies used for Cloud testing. • Detailed review of TAAS (Testing As A Service) – benefits, current trends, how to implement or subscribe TAAS. • High level overview of Functional and Non-functional testing. • Group activities on Cloud testing. • Managing Cloud testing challenges and risks. • High level overview of leading Cloud testing tools <p>Lab Session: Creating AWS account Creating Test Farm</p>
<u>18</u>	<u>Jenkins</u>	<u>Jenkins</u>	<ul style="list-style-type: none"> • Getting Started with Jenkins • Plugins and its uses • Setting Up Your Build Jobs • Implementing Automated Testing • Using Metrics to Improve Quality • Maintain and Use Jenkins <p>Lab Session: Creating Jenkins Jobs Scheduling Automated Jobs to trigger selenium test suite</p>

<u>19.a</u>	<u>SQL Overview</u>	<u>Data warehouse Testing</u>	<ol style="list-style-type: none"> 1. DW/BI concepts 2. Tool basic concepts 3. Simple SQL queries 4. Data extraction and comparison <p>Lab Session: Writing Queries for ETL Testing (Tool- Query Serge)</p>
<u>19.b</u>		<u>Data warehouse Testing</u>	<ol style="list-style-type: none"> 1. DBMS Concepts 2. Normalization 3. Joins 4. Database Objects 5. Stored Procedure tests 6. Trigger Test 7. Structural Database Testing 8. Migration Testing and data testing 9. Automation of data comparison and migration and reporting <p>Lab Session: Automating Database Testing Creating Database Test Reports</p>
<u>20</u>	<u>SOAPUI /REST Assured</u>	<u>SOA Testing (API Testing)</u>	<p>Using SoapUI</p> <ol style="list-style-type: none"> 1. Overview 2. SOAP UI / Rest Assured 3. Using Soap and REST protocol 4. Pilot Project 5. Automation of SOAP and REST <p>Lab Session: Creating a web service Test Project, Suite Creating a Data Driven Test</p>