

VERSION

2
4

SR. CODE

EAPL/CRASH/CRTC27

COURSE CODE

EACSJ

SUB CATEGORY

TESTING



TOTAL DURATION

45
HOURS



THEORY TAKEN

11
HOURS



PRACTICAL TAKEN

34
HOURS

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SELENIUM
JAVA COURSE
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COURSE DESCRIPTION



The Selenium Java course provides comprehensive training in automated testing using Selenium WebDriver with Java, covering topics such as test automation frameworks, page object model, and continuous integration.

COURSE GOALS



By completion, students will proficiently develop and execute automated test scripts using Selenium WebDriver with Java. They will master techniques to enhance test coverage, improve test efficiency, and integrate automated tests into the software development lifecycle.

FUTURE SCOPE



Graduates will be well-equipped for roles as test automation engineers, quality assurance analysts, or software developers in test. With the increasing demand for automated testing in Agile and DevOps environments, opportunities for Selenium Java professionals are abundant, ensuring a promising career trajectory in software testing and quality assurance.

01

CHAPTER

SELENIUM JAVA

1. Java Programming for Software Testers

- A. Introduction
- B. Environment Setup
- C. Sample Java Code
- D. Getting input from User
- E. Arithmetic Operations
- F. If Statement
- G. If Else if
- H. Nested If
- I. Comparing More than One Condition
- J. Switch Case
- K. For Loop
- L. While Loop
- M. Do While Loop



02
HRS



07
HRS

02

CHAPTER

OBJECT- ORIENTED PROGRAMMING USING JAVA

- a. Introduction
- b. Structure of OOPS(Class,method, object)
- c. Inheritance
- d. polymorphism
- e. Encapsulation
- f. Abstraction
- g. Exception handling



02
HRS



04
HRS

03

CHAPTER

SELENIUM

1. About Automation testing

- a. Automation means
- b. Why and when we go for automation
- c. Automation tools
- d. Advantage and disadvantages of automation
- e. Criteria for automation
- f. Fundamentals of test automation
- g. Automation Vs Manual testing process
- h. Automation Frameworks

2. About selenium

- a. What is selenium tool
- b. User of selenium
- c. Features of selenium tool
- d. Advantage and disadvantages of selenium
- e. Installation setup

3. Selenium components

- a. Selenium IDE
- b. Selenium RC
- c. Selenium Web driver
- d. Selenium Grid



02
HRS



03
HRS

4. Selenium Web Driver

- a. Web driver architecture
- b. Web driver Feature
- c. Web driver VSRC
- d. Web driver Installation
- e. Web driver commands
- f. Running test on chrome
- g. Running test in Firefox
- h. Running test on IE
- i. Running test on safari

04

CHAPTER

LOCATORS

1. Locators

- a. ID
- b. Name
- c. Link text
- d. Partial link text
- e. Class name
- f. Tag name
- g. Absolute Xpath
- h. Relative Xpath
- i. Dynamic Xpath



01
HRS



05
HRS

2.Xpath

- a.Contains Xpath
- b.Text Xpath
- c.Text contains Xpath
- d.Attribute with contains
- e.Following
- f.Ancestor
- g.Child
- h.Preceding
- i.Following – sibling
- j.Parent
- k.Descendant

05

CHAPTER

WEB ELEMENTS

1.Web Elements in selenium

- a.What are web elements in selenium
- b.Different types of web element
- c.Operations performed in web elements
- d.How to locate web element in web page
- e.Different web element methods
- f. Difficulties while handling web elements
- g.Handling waits



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HRS

2. Web Driver commands

- a. Fetching a webpage
- b. Locating elements and sending user inputs
- c. Clearing the user inputs
- d. Fetching data over any web element
- e. Performing click event
- f. Radio button and check box
- g. Navigating browser in forward and backward direction
- h. Refresh and reload the webpage
- i. Closing windows and closing browser
- j. Drag and drop
- k. Mouse hover action
- l. Right click and double click
- m. Keyboard action by using robot class
- n. Java script executor
- o. Handling drop down
- p. Handling of window
- q. Handling of alert
- r. Handling I Frames
- s. Handling web table and web calendar
- t. Screenshot

06

CHAPTER

FRAME WORK

1. Frame work in selenium

- a) What is Framework
- b) Need of Framework
- c) Type of framework in selenium



01
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06
HRS

2. Test NG Framework

- a. What is Test NG**
- b. Installation of TestNG**
- c. Features of testing and Types of annotations**
- d. Priority & invocation count**
- e. Rerun for failed test cases**
- f. Parallel execution**
- g. Grouping**
- h. How to set assert in testing**
- i. Dependencies and configure maven project**
- j. @ data provider using apache poi
(excel sheet)**
- k. Report generations**

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