JEPPIAAR
ENGINEERING COLLEGE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Subject Name: CCS366- Software Testing and Automation

Year/ Semester: III/ V

Faculty Name: Dr. J. Arokia Renjit

Academic Year: 2024–2025

Title of Activity:

Demonstration of Automated Web Testing using Selenium WebDriver

Objective of the Innovation:

To enhance students' understanding of software testing automation through a live demonstration of **Selenium WebDriver**, enabling them to connect theoretical testing concepts with practical, real-world applications.

CO & PO Mapping

Understand the architecture and learning of neural networks	CO2
Modern Tools	PO5
Life Long Learning	PO12

Brief Description of the Activity:

As part of the course delivery for **CCS366 – Software Testing and Automation**, the faculty introduced **Selenium**, an industry-standard tool for automated web application testing. A **live coding session** was conducted in class to:

- Demonstrate recording and running test scripts
- Show how to automate browser interactions using Selenium with Python/Java
- Explain test case creation, test execution, and validation
- Illustrate how automation improves test efficiency and reduces manual errors

The activity emphasized practical learning by integrating a real-time login form testing example.

Tool/Innovation Used:

Selenium WebDriver

Key Features Demonstrated:

- Open-source, cross-browser testing
- Script creation using Python or Java
- Element location using XPath, CSS Selectors
- Assertions for test pass/fail status
- Integration with TestNG (if Java was used)

Learning Outcomes Achieved by Students:

- Understood the concept of automation and where it fits in SDLC
- Learned basic Selenium script writing
- Gained exposure to real testing environments
- Saw live debugging and test result evaluation
- Built confidence to try automated testing independently

Teaching Methodology Enhanced Through:

- Live Demo with Code Execution
- Error Analysis and Debugging Discussion
- Code Walkthrough with Real Examples
- Interactive Q&A and Error Handling Scenarios

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