

Date:22-06-2024

## Hands-On Workshop on “Innovative approach to Software Testing and Automation Testing Tool”

Name of the Program:	Hands-On Workshop on “Innovative approach to Software Testing and Automation Testing Tool”	Program Dates & Timings:		22.06.2024 9.00AM- 1.00PM	
Name & Details of the Resource Person:	<b>Mr. Prakhyath, 7EDGE Software Development Engineer in Test I (SDET I)</b> <b>Mr. Swasthik, 7EDGE Software Development Engineer in Test I (SDET I)</b>				
Organized by (Clubs/ Dept.)	Department of Information Science and Engineering	In Association with (clubs)		Alumni Committee	
Number of Participants	66	Students	61	Faculty	9
Program Outcome (PO) Mapping	PO1, PO2, PO3, PO4, PO5, PO 6, PO10, PO12				
Coordinators	Mrs. Sharanya P S				
Faculty Participated	Dr. John Prakash Veigas, Mr.Sayeesh., Mrs. Sharanya P S, Mrs. R. Sahaya Shamini, Mrs. Deepti Rai				

### About the Talk

The session on Innovative approach to Software Testing and Automation Testing Tool introducing participants to testing field and various tools available for automation testing process. It emphasises on modern methodologies and tools in software testing, innovative approaches that enhance efficiency, accuracy, and reliability. The focus will be on automation testing tools and their impact on the software development lifecycle. Resource persons are the alumni of the Information Science and Engineering Department.

Attendees were immersed in the foundational principles of software testing, delving into its core features and using of Selenium tool for testing the web applications. Throughout the

workshop, participants were equipped with a deep understanding of software testing tools, and carrying the testing under selenium testing tool which underpins its robust performance and versatility across different applications. By exploring testing mechanism and automation testing tools, attendees grasped the flexibility and efficiency offered by this field in developing automation testing using selenium and building script to run the automation testing. Students were also exposed to practical exercises and questions, giving them an idea of the industry-level knowledge required. Students applied their knowledge to perform automation testing on the developed front-end application.

### **Key Topics Covered:**

- **Introduction to Software Testing:** Importance of software testing in the development lifecycle. Current challenges and opportunities in software testing.
- **Design Thinking in Software Testing:** Applying design thinking to create effective testing strategies. Enhancing user experience through thoughtful testing practices.
- **Introduction to Behaviour-Driven Development (BDD)** Fundamentals of BDD and its significance in modern software development. Benefits of using BDD for clear and concise test case definitions. Phases in BDD
- **Gherkin Syntax:** Introduction to Gherkin language and its role in BDD. Writing clear and understandable feature files using Given-When-Then syntax.
- **Introduction to Selenium and Cucumber:** Introduction to Cucumber as a BDD framework.
- **Integrating Selenium with Cucumber for robust test automation.**
- **Tools Used for Software Testing:** Tools for test management, automation, performance testing, and more. Criteria for selecting the right tools for specific testing needs.
- **Automation Testing Using BDD:** Step-by-step guide to setting up a BDD test automation framework.
- **Writing and executing automated tests** using Selenium and Cucumber. Continuous integration and delivery with BDD and automation tools.
- **Implement automation testing for sample web application using Selenium and Cucumber.**

## About the Program:

The Department of Information Science and Engineering in association with Alumni Committee organizing a one day Hand-on Workshop on “**Innovative approach to Software Testing and Automation Testing Tool**” for the students of 3<sup>rd</sup> Year ISE on 22/06/2024 from 10:00 AM – 4:00PM at A 305 Lab.

### Agenda:

Time	Topics Covered	Resource Person
10:00 AM – 10:15 AM	Inauguration of the workshop	
10:15 AM – 11 AM	Introduction to software Testing	Mr. Prakyath
11 AM – 11: 30 AM	Introduction to BDD (Behavior Driven Development)	Mr. Prakyath
11:30 AM – 11:40 AM	Break	
11:40 AM – 1: 00 PM	Gherkin Syntax and example related to the syntax.	Mr. Prakyath
2:00 PM – 3:00 PM	Introduction to selenium web driver	Mr. Prakyath, Mr. Swasthik
3:00 PM – 3:10 PM	Break	
3:10 PM – 4:00 PM	Automating the gherkin scenario through step definition using JavaScript. Run Test for the sample Web Application	Mr. Swasthik, Mr. Prakyath

### Objectives:

**Introduction to Software Testing:** Provide a comprehensive overview of software Testing, including its significance and applications in developing test cases and test the software’s

**Foundational Principles:** Immerse participants in the foundational principles of automation testing, covering both manual and automation testing. Includes the core features of testing and apply the testing for identifying the errors.

**Understanding Selenium Testing Tool:** Equip participants with a deep understanding of selenium and cucumber architecture, emphasizing its role in ensuring robust performance and testing.

**Hands-on Approach:** Explore testing through practical exercises, allowing attendees to experience the process of building modern and responsive testing mechanism.

**Industry-Relevant Skills:** Expose students to practical exercises and questions that reflect on industry culture

**Tools and Technologies:** Introduce participants to essential tools and technologies used in testing, and familiarise VS Code platform.

### Outcomes:

- Participants will be able to understand the latest trends and innovations in software testing.
- Participants will be able to build a script to test the web application by using Selenium and cucumber tool
- Participants will be able to analyse the practical insights and strategies to enhance their testing frameworks.
- Participants will be able to apply the innovative approach to test any of the web applications.

### Articulation Matrix:

Course Outcomes	Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12
1	2	2	2							1		2
2	2	3	1	1	3	2						2
3	1	2	3	2						2		
4	2	3	2	1	3	1				2		2
Average	2	3	2	1	3	2				2		2

### Glimpses of Event:



**Fig: Hands-On Workshop**



**A.J. Institute of Engineering & Technology**  
(A Unit of Laxmi Memorial Educational Trust \*)  
Kottara Chowki, Mangaluru

**DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING**  
In Association with Alumni Committee  
Organizes a hands-on Workshop on

**Innovative Approaches to Software Testing and Automation Testing Tools**

**22 June, 2024**  
**10:00 AM – 04:00 PM**  
**Venue :A-305**

**Speakers**

  
**Prakhyath**  
Software Development Engineer in Test | 7 Edge

  
**Swasthik**  
Software Development Engineer in Test | 7 Edge

**Dr. Shantharama Rai C**  
Principal

**Dr. John Prakash Veigas**  
HOD, ISE

**Dr. P Mahabaleswarappa**  
Dean Academics

**Dr. Antony P J**  
Vice Principal

**Mrs. Sharanya P. S.**  
Faculty Coordinator

**Our Patrons**

**Dr. A J Shetty**  
President, LMET

**Mr. Prashanth Shetty**  
Vice President, LMET

**Dr. Prashanth Marla K**  
Medical Director, AJHRC

**Mrs. Sharadha Shetty**  
Director, LMET

**Mrs. Ashritha P Shetty**  
Director, LMET

**Dr. Amitha P Marla**  
Director(Admin), AJHRC





**Fig: Participants of Worksop**

Event Coordinator

Alumni - Coordinator

HOD - ISE

Academic Dean

Principal