

08B51CI701: Software Testing and Debugging Lab

Course Credit: 1

Semester: V

Objective:

1. To develop, implement black box and white box testing cases.
2. To understand use of Flow graphs and computing cyclomatic complexity using various methods.
3. To understand and implement automated software testing techniques for Web testing, Performance testing, and GUI testing.
4. To develop, implement, and demonstrate the learning through a project that meet stated specifications.
5. Debugging of existing program codes and developing test cases.

Learning Outcomes:

1. You will broaden your knowledge of software engineering.
2. You will learn Software testing algorithms and programs.
3. You will increase your proficiency in JAVA Language.
4. You will know how strategies and tactics of effective and efficient testing.
5. You will gain practical experience in design, develop, and document static, white-box, black-box tests.
6. You will acquire the background for understanding Test Management and Software Development.
7. You will acquire the knowledge of higher order and object oriented testing.
8. You will learn a effective and efficient use of debugging techniques.
9. You will learn how to make use of Web testing and automated software testing.

List of Experiments

S NO	Topics
1	Basic Testing Concepts
2	Black Box Testing Techniques
3	White Box Testing Techniques
4	Testing a real life software (Unit, Integration, system, performance, Black box, White Box, Mutation testing, Fault Injection, Regression and Test case prioritization)
5	Web and GUI Testing

References

1. Glenford Myers, "The Art of Software Testing", John Wiley & Sons Inc., New York, 1979.
2. Aditya P. Mathur, "Foundations of Software Testing" Pearson Education 2008
3. Louise Tamres, "Software Testing", Pearson Education Asia, 2002
4. William Perry, "Effective Methods for Software Testing", John Wiley & Sons, New York, 1995.
5. Cem Kaner, Jack Falk, Nguyen Quoc, "Testing Computer Software", Second Edition, Van Nostrand Reinhold, New York, 1993.

Evaluation Scheme:

1. Mid Term Exam (Viva and Written Exam)	20
2. End term Exam (Viva and Written Exam)	30
3. Lab Records	5
4. Regular Assessment (Quality and quantity of experiment performed, Learning laboratory skills, Attendance etc.)	30
5. Project	15

Total **100**