SET-221
Software Testing Technologies

LAB # 07

LAB Title

Open Ended Lab Activity

Assessment of CLO: 04, PLO: 05

Student Name:			
Roll No.			
Semester		Session	

S. No.	Perf. Level / Criteria	Excellent (2.5)	Good (2)	Satisfactory (1.5)	Needs Improvement (0 ~ 1)	Marks Obtained
1	Project Execution & Implementation	Fully functional, optimized, and well-structured.	Minor errors, mostly functional.	Some errors, requires guidance.	Major errors, non-functional, or not Performed.	
2	Results & Debugging Or Troubleshooting	Accurate results with effective debugging Or Troubleshooting.	Mostly correct, some debugging Or Troubleshooting needed.	Partial results, minimal debugging Or Troubleshooting.	Incorrect results, no debugging Or Troubleshooting, or not attempted.	
3	Problem-Solving & Adaptability (VIVA)	Creative approach, efficiently solves challenges.	Adapts well, minor struggles.	Some adaptability, needs guidance.	Lacks innovation or no innovation, unable to solve problems.	
4	Report Quality & Documentation	Clear, structured, with detailed visuals.	Mostly clear, minor gaps.	Some clarity issues, missing details.	Poorly structured, lacks clarity, or not submitted.	
Total Marks Obtained Out of 10						

Experiment evaluated by

Instructor's Name	Engr.Bushra Aziz		
Date		Signature	

Objective: To design and implement comprehensive unit tests for a simple C++ Stack class using Google Test.

Task:
Create a simple C++ class named Stack that stores integers. It should provide the fundamental stack operations: Push, Pop, Peek, IsEmpty, and Size. Consider how your implementation will handle potential edge cases.

1. Design and implement a comprehensive set of test cases to verify the correctness and robustness of all the stack operations. Consider various input scenarios and edge cases. Explore different assertion types provided by Google Test to effectively validate the behavior of your stack.
2. Consider how features like test fixtures and parameterized testing could enhance the organization and efficiency of your test suite. Implement these features where you deem them beneficial.

In your lab report, document your testing strategy. Explain the different types of test cases you designed and why they are important. Describe how you handled any challenges or design decisions you made during the testing process. If you used test fixtures or parameterized testing, explain your reasoning and how they improved your testing.