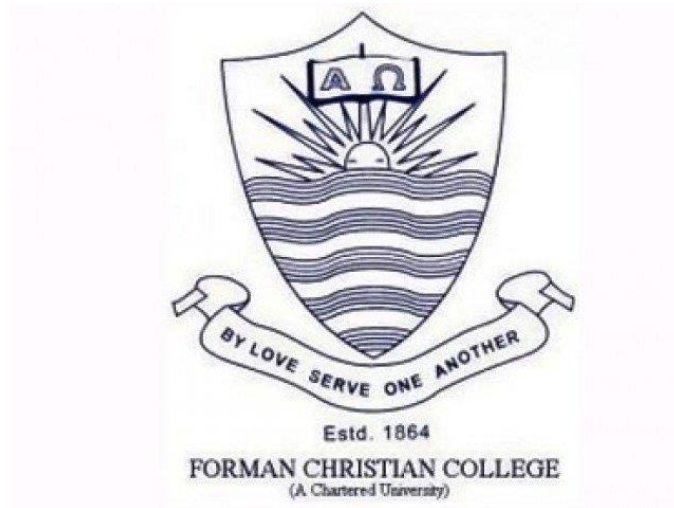


# Data Structures and Algorithms

Comp 200

Fall 2022



Department of Computer Science  
Forman Christian College University

## Lab 4

### Time Complexity and Recursion

DESCRIPTION	MARKS ALLOCATED
Attendance	25%
Task Completion	35%
Viva	35%
Submission	15%

Marks will be deducted in case if students have not completed the assigned task.

Note that these marks are max in each category. We may assign less than the given percentage of marks in case students have not successfully completed all the requirements.

This lab is time constrained. Please note that you must finish and submit your work within given time.

**Question 1:**

[Weightage: 10%]

Suppose an initially empty stack *S* has executed a total of 25 push operations, 12 top operations, and 10 pop operations, 3 of which raised Empty errors that were caught and ignored. What is the current size of *S*?

**Question 2:**

[Weightage: 15%]

Write a python program that checks brackets are balanced in an expression using stack.

**Question 3:**

[Weightage: 15%]

Write a python program that reverses a string using stack.

**Question 4:**

[Weightage: 60%]

Implement Round Robin Scheduling Algorithm using Queues.