Department of Information Technology

A.Y. 2023-2024
Class: SE-ITA/B, Semester: III
Subject: DATA STRUCTURE LAB

Experiment – 0: Structure implementation using C programming

1. Aim: Aim: Design a structure student_record to contain name, roll_number, and total marks obtained. Write a program to read 10 students data from the use and then display the first three toppers on the screen.

2. Objectives: After study of this experiment, the student will be able to

- Recall the concepts of Structures and arrays
- Implement an algorithm using computer to solve the given problem

3. Outcomes:

- Develop a C program to solve a given problem

4. Prerequisite: C basics

5. Requirements: PC and Turbo C compiler version 3.0 , Codeblock with gcc

6. Pre-Experiment Exercise:

Brief Theory on:

i) What is an Array?
ii) What is structure ?
iii) What is array of structure?

7. Result/Observation/Program code: The snapshot of the output obtained is to be printed by students.

8. Post-Experiments Exercise

Questions:
i. Difference between arrays and structures
Ii MCQ Prerequisite

9. Conclusion:

i. Summary of Experiment
ii. Importance of Experiment
iii. Application of Experiment

10. References:

i) Ellis Horowitz, Sartaj Sahni; Fundamentals of Data Structures; Galgotia Publications; 2010.
ii) S. K Srivastava, Deepali Srivastava; Data Structures through C in Depth; BPB Publications; 2011.
iii) Reema Thareja; Data Structures using C; Oxford.
iv) https://www.programiz.com/c-programming
v) https://www.javatpoint.com/c-programming-language-tutorial