National University of Computer and Emerging Sciences

Lab Manual # 7

Programming Fundamentals

(Section BCS-1H1&1H2)

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Sections	BCS-1H1 & 1H2
Semester	Fall 2022

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Objectives:

After performing this lab, students will be able to solve programming problems using

- If/else if, switch, while, for (revision)
- Inputting and outputting in Arrays

60 marks

1. Ask for the number of hours worked by six employees and store the values in an array.

2. Calculates the charges for membership in a health club. The club has three membership packages to choose from: standard adult membership, child membership, and senior citizen membership. The program presents a menu that allows the user to choose the desired package and then calculates the cost of the membership. (use if/else if)

3. Write C++ program to check for zero or non-zero and odd or even using nested switch statement.

4. Write a program that uses an array of 10 characters to store first ten letters of alphabet and display ASCII of these characters.

5. A project currently underway at Chemical Labs, Inc. requires that a substance be continually heated in a vat. A technician must check the substance's temperature every 15 minutes. If the substance's temperature does not exceed 102.5 degrees Celsius, then the technician does nothing. However, if the temperature is greater than 102.5 degrees Celsius, the technician must turn down the vat's thermostat, wait 5 minutes, and check the temperature again. The technician repeats these steps until the temperature does not exceed 102.5 degrees Celsius. The director of engineering has asked you to write a program that guides the technician through this process.

6. Calculates a company's total sales over a period of time by taking daily sales figures as input and calculating a running total of them as they are gathered.