National University of Computer and Emerging Sciences

Laboratory Manual #4

for

Programming Fundamentals

(CL 1002)

Department of Computer Science
FAST-NU, Lahore, Pakistan

Introduction

Objectives

After performing this lab, students shall be able to:

- Convert pseudo code into C++ Code.
- Run C++ code on Visual Studio Compiler
- Write C++ Code for the problems involving Basic printing statements

Problems

Question#1:

Practice the following on Visual Studio:

a) Create a blank C++ file using Microsoft Visual Studio
b) Create and save a cpp File in default directory
c) Create and save a cpp file in any location other than default location
d) Upload the test file for submission on google classroom. (do not upload project just cpp file)

Question#2:

Write a C++ program that simulates a simple ATM machine. Ask the user to enter the amount they want to withdraw, and if the balance is sufficient, deduct the amount and display a success message. Otherwise, display an error message.

Question#3:

Implement a C++ program that determines the grade for a given mark according to the following criteria:

- A: 90-100
- B: 80-89
- C: 70-79
- D: 60-69
- F: Below 60

Question#4:

Implement a C++ program that continuously prompts the user to enter numbers until they enter -1 as a sentinel value. Calculate and display the sum of all the entered numbers (excluding the sentinel).

Question#5:

Create a C++ program that uses a flag to find whether a given number is prime or not.

Question#6:

Write a C++ program that calculates the factorial of a given number using a while loop.

Question#7:

Create a C++ program that simulates a guessing game. Generate a random number between 1 and 100. Ask the user to guess the number, and provide hints (higher or lower) until they guess correctly.

Question#8:

Create a C++ program that simulates a basic quiz. Ask the user a series of questions, get their answers, and then display their score at the end.

Question#9:

Write a C++ program that simulates a simple menu-driven calculator using do-while loop. It will continue to take input of two numbers and operator and continuously show results until users enters 0.