**East West University**

**Department of Computer Science and Engineering**

**CSE103: LAB 02**

**Course Instructor: Dr. Ahmed Wasif Reza**

**1. In this problem you will develop a calculator which can do Addition, Subtraction, Multiplication, Division and Modulo (Remainder). Use switch-case statement.**

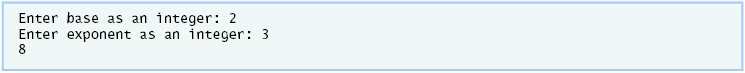
Your program will take input as follows:

**Input Output**

4 + 7 11

7 % 3 1

**2. Write a C program to calculate where *x* is base (an integer) and *y* is exponent (an integer) as follows. The program should have a while repetition statement. [Hints: while loop]**



**3. The factorial of a nonnegative integer *n* is written *n*! (pronounced “*n* factorial”) and is defined as follows:**

***n*! = *n* · (*n* – 1) · (*n* – 2) · … · 1 (for values of *n* greater than 1)**

**and**

***n*! = 1 (for *n* = 0 or *n* = 1).**

**For example, 5! = 5 · 4 · 3 · 2 · 1, which is 120. Use for statements in each of the following:**

**Write a program that reads a nonnegative integer, and computes and prints its factorial. [Hints: for loop]**

**4. User will input two points in XY coordinate system (X1, Y1) and (X2, Y2). Calculate the distance between two points and level them ‘Near’ if the distance is less than or equal to 10 and ‘Far’ if the distance is greater than 10. Terminate the Program if user enters 0 for all the inputs.**

Distance between two points is calculated by the formula:

this is the distance formula where d stands for distance, (x1,y1) is the first point while (x2,y2) is the second point. d = sqrt[(x2-x1)^2+(y2-y1)^2].

Sample Input/Output:

**Input** **Output**

-4 -3 4 3 Near

5 5 25 10 Far

-10 13 -6 22 Near

0 0 0 0

**5. Generate the following output using nested for loops.**

Text

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