University of Central Punjab
(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)
FACULTY OF INFORMATION TECHNOLOGY

Programming Fundamentals

Assignment 04 (PF-A)

Instructions **Deadline:** Friday, June 26, 2020 - 11:59:59 pm

- *You can only submit on CMS Portal OR MS Teams. Submission on any other channel will not be considered.*
- *No late submission in any case will be accepted*
- *Copying from others will result in Zero (For both parties.)*
- *Put all *.cpp files into a folder and compress it*
- *Rename compressed file with your Registration No.*
- *Send only *.cpp files of code*

Question No. 01

Write a C++ program which reads no. of rows and columns of two matrixes from user. You need to multiply both matrixes so, if input (no. of rows and columns) is not valid for multiplication, ask user to enter again until valid input is entered by user. Use dynamic memory allocation to create two matrixes. Ask user to enter values in two matrixes. Define a function (Name: **Multiply()**) which multiplies both matrixes and store result in a 3rd matrix (dynamically allocate memory to this matrix). Define another function (name: **display()**) which displays the result on output screen. You are not allowed to use array subscript instead use pointer scripting. For example,

Right: *(ptr + n) = 5;

Wrong: ptr[n]=5;

Note:

For matrix multiplication, the number of columns in the first matrix must be equal to the number of rows in the second matrix. The result matrix, known as the matrix product, has the number of rows of the first and the number of columns of the second matrix.

Sample Output:

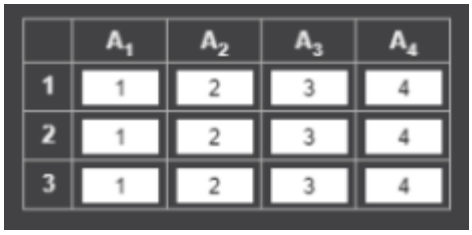
Enter No. of rows in matrix 1: 3
Enter No. of columns in matrix 1: 4

Enter No. of rows in matrix 2: 4
Enter No. of columns in matrix 2: 2

Input to matrix 1:
Enter value for row 01 col 01: 1
Enter value for row 01 col 02: 2
Enter value for row 01 col 03: 3
Enter value for row 01 col 04: 4

Enter value for row 02 col 01: 1
Enter value for row 02 col 02: 2
Enter value for row 02 col 03: 3
Enter value for row 02 col 04: 4

Enter value for row 03 col 01: 1
Enter value for row 03 col 02: 2
Enter value for row 03 col 03: 3
Enter value for row 03 col 04: 4



Input to matrix 02:
Enter value for row 01 col 01: 0
Enter value for row 01 col 02: 1

Enter value for row 02 col 01: 0
Enter value for row 02 col 02: 1

Enter value for row 03 col 01: 0
Enter value for row 03 col 02: 1

Enter value for row 04 col 01: 0
Enter value for row 04 col 02: 1

Answer is:
0 10
0 10
0 10
0 10