

# ASSIGNMENT#2

**Write programs to solve the following problems using C++. Copy Paste will get straight ZERO.**

1. Write a function which takes as parameter a pointer of type int and assigns it a new memory location. Now from the main function pass this pointer to another function which assigns a value to new assigned memory location. Create another function which prints the value pointed by the pointer. Finally create another function which destroys the memory location assigned to the pointer and null the pointer.
2. Write the definition of a function that takes as input three decimal numbers (e.g. a, b, c) and returns the first number multiplied by the second number to the power of third number i.e. returns  $(a*b)^c$ .
3. Write a program that uses a two-dimensional array to store the highest and lowest temperatures for each month of the year. The program should output the average high, average low, and the highest and lowest temperatures for the year. Your program must consist of the following functions:
  - i. Function getData: This function reads and stores data in the twodimensional array.
  - ii. Function averageHigh: This function calculates and returns the average high temperature for the year.
  - iii. Function averageLow: This function calculates and returns the average low temperature for the year.
  - iv. Function indexHighTemp: This function returns the index of the highest high temperature in the array.
  - v. Function indexLowTemp: This function returns the index of the lowest low temperature in the array.
4. Declare a 2D dynamic array. Now write a function that takes as pointer a single dynamic array and initializes the array with user input. Pass each 1D array from the 2D array to this function step by step to get them initialized. Print they array

e-g my2Darray = [ - , - , - , - , - ]  
                          [ - , - , - , - , - ]  
                          [ - , - , - , - , - ]

As a whole the above array is 2D but if you look at each row then each row is a 1D array.

5. Create a struct which stores basic details about a person e-g name, age etc. Now dynamically create array of this struct of n length. Pass this array to a function which initializes the array. Print the array of struct.