Lab Assignment – 3

Total Marks: 2x8 = 16

1. Write a program to create an array of length 26. Each element of the array is generated as the sum i + ch where i is the counter which stats at 0 and ends at 25 and ch starts with 'A' and ends to 'Z'. It means first value is 0+'A', second 1+'B' and so on. Then print the values of the array.

2. Write a program to calculate factorial of a given number.

3. Write a program to find HCF (GCD) and LCM of two numbers taken as input from user.

4. Write a program which takes the number of rows and columns of a two dimensional matrix as input and request the corresponding values row-wise and then prints the matrix.

5. Write a program to multiply two 3x3 matrices A and B and store the result in matrix C and then display matrix C.

6. Twenty numbers are entered from the keyboard into an array. The number to be searched is entered through the keyboard by the user. Write a program to find if the number to be searched is present in the array and if it is present, display the number of times it appears in the array.

7. let us assign the values 0 to 25 to each of the English alphabets (considering only upper case) as below:

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U

21	22	23	24	25
V	W	X	Y	Z

   Alice wanted to send a message to Bob but changed the actual text before sending. Alice shifted every letter to 3 positions. So A becomes D and similarly Y becomes B, etc. If the message received to Bob is 'khosph', what was the actual message?
   Expected Input: khosph and **output:** the actual message

8. Write a program to move all zeroes to the end of a given array.
   Sample input:
       Given array is: 2 5 7 0 4 0 7 -5 8 0
   Sample output:
       The new array is: 2 5 7 8 4 -5 7 0 0 0