C Marathon – Final Round

Answer all questions

**Questions : 1**

Write a c program to check the given number is a fascinated number or not. Fascinated number is a number which is multiplied with 1, multiplied with 2 and multiplied with 3. All digits from 1 to 9 must appear in the number. Condition is never use library function like strlen ,strcpy ,strcat ,sprintf etc.

Example:

Input n=192

192\*1=192

192\*2=384

192\*3=576

Output n=192384576

**Questions:2**

Write a c program to calculate factorial of a number N. The number is non-negative non zero integer which will be given as input without using any library function such as scanf,fscanf,vscanf,sscanf,getch,gets like function. Write program using pointer.

**Questions:3**

Write a program to solve the following number pattern

1

3 \* 2

4 \* 5 \* 6

10 \* 9 \* 8 \* 7

11 \* 12 \* 13 \* 14 \* 15

**Question: 4**

Write a program to calculate gcd of all numbers present in an array of integers.

Condition : Use a function called gcd which takes two parameters such as array name such as arr and length and return the gcd value from the function.

Example

Int \* gcd(int arr[],int size )

{

}

**Question:5**

There are two array exist such as X and Y. All elements of an array X is present in an array Y. Write a program to find all extra elements present in an array Y. Use a function called extra which will take two parameters such as X and Y and returns the array Z which contains extra elements.

**Questions:6**

Given an unsorted integer array of length n. Write a program to find the alternate elements of sorted array starting from the second position.

Condition : sort the elements by using “radix sort” . The sorted array consists of the elements in descending order.

**Questions:7**

Write a program for the following pattern

\*

\* 1 \*

1. \* \* \* 2

\* \* \* 3 \* \* \*

4 \* \* \* 4

\* 5 \*

\*

**Questions:8**

Write a program to sort all the three characters words , four character words and five characters words present in a file in dictionary order.