

**Use appropriate user defined function to solve the questions given below**

1. Given an integer number write a program in C++ using while loop to reverse the digit of the number.

For example

the number 12345 should be written as 54321

2. The factorial of an integer m is the product of consecutive integers from 1 to m. that is  
Factorial m =  $m! = m*(m-1)*.....*1$ .

Write a program in C++ that computes and print the result for any given m.

3. Write the program to print the following outputs using for loops.

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

4. Write a program in C++ to read the age of 10 persons and count the number of persons in the age group 50 to 60.
5. Write a program in C++ to print a multiplication table n using while loop. where the value of n is inputted by the user.
6. Write a program to print a square size 5 by using the character S as shown below

S	S	S	S	S
S	S	S	S	S
S	S	O	S	S
S	S	S	S	S
S	S	S	S	S

7. Write a program to print a floyed triangle as shown bellow

```
*
*  *
*  *  *
*  *  *  *
```

8. The numbers in the sequence 1 1 2 3 5 8 13 21..... are called Fibonacci numbers. Write a program in C++ using a for loop to calculate and print the Fibonacci numbers.

9. Write a program in C++ that compute the sum of the digit of a given integer number.

Input:

5654

Output:

20

10. For each integer n in the interval [a, b](given as input):

- If  $1 \leq n \leq 9$ , then print the English representation of it in lowercase. That is 1 for "one", 2 for "two" and so on.
- Else if  $n > 9$  and it is an even number, then print "even".
- Else if  $n > 9$  and it is an odd number, then print "odd".

Input Format:

The first line contains an integer, 5

The second line contains an integer, 11

Sample Output:

five

six

seven

eight

nine

even

odd

11. Write a program in C++ to sort an array in ascending order and find the 3<sup>rd</sup> largest element in array in the array.

12. Write a program in C++ to print a 3x3 matrix using array.

13. Write a program to add, Subtract and multiply two matrix Using 2D Array.

14. Suppose you have an Array with the size of 10. Your program will input all the array elements from the user. Now using a loop, traverse the array. During traversing if the array contains an odd number in odd index, take the odd value from that odd index from

the array and make the summation of those numbers and replace that index value with 0. Print the summation and also the array. The given sample is for your understanding. You must use your own sample.

Example:

Before Operation –

Index	1	2	3	4	5	6	7	8	9	10
Elements	1	3	6	5	7	9	11	8	3	8

After Operation Elements 0 3 6 5 0 9 0 8 0 8 Summation = 22

Elements	0	3	6	5	0	9	0	8	0	8
----------	---	---	---	---	---	---	---	---	---	---

Summation = 22

15. The scenario in front of any virtual Bank is like, Men and women are standing in a single line. It looks so bad. Now separate men and women in different two line that it looks like a gentle management system and also develop the above program to find the majority of gender in the line.

Disarranged line scenario is like -

M	M	W	W	M	M	M	M	W	M
---	---	---	---	---	---	---	---	---	---

M = male

W = Women

After operation-

M	M	M	M	M	M	M
---	---	---	---	---	---	---

W	W	W
---	---	---

16. There's a list of number in a row on the table. Your teacher is telling a number which is the addition of any of the two number from the given number list on the table. Your job is to find that two number which addition is equal to the number given by your teacher. If there's no pair of number in a list is equal to the given number by your teacher, then you will say "Sir, there's no pair of numbers equal to your number" otherwise you will show that two number which addition is equal to the given number by your teacher. Write a program to solve the situation.