Programming for problem solving LAB date: 08.03.2021 SEC-G

- 1. Write a program in C to find the Factorial of a number using recursion.
- 2. Write a program in C to find GCD of two numbers using recursion.
- 3. Write a program in C to convert decimal number to binary number using the function.

Test Data:

Input any decimal number: 65

Expected Output: The Binary value is: 1000001

Decimal to Binary

$$47 \div 2 = 23$$
 Remainder 1
 $23 \div 2 = 11$ Remainder 1
 $11 \div 2 = 5$ Remainder 1
 $5 \div 2 = 2$ Remainder 1
 $2 \div 2 = 1$ Remainder 0
 $1 \div 2 = 0$ Remainder 1
Divide by 2 stops as quotient reaches 0

$$(47)_{10} = (101111)_{2}$$

4. Write a program in C to get the largest element of an array using the function.

Test Data:

Input the number of elements to be stored in the array :5

Input 5 elements in the array:

element - 0 : 1

element - 1:2

element - 2:3

element - 3:4

element - 4:5

Expected Output: The largest element in the array is: 5

- 5. Write a C program ,to delete an element from an array.
- 6. Write a program in C to print all unique elements in an array.

- 7. Write a program in C to count the frequency of each element of an array.
- 8. Write a program in C to sort elements of array in ascending order.
- 9. Write a program in C to print the elements of an array in reverse order.
- 10. Write a program in C to swap elements using call by reference.
- 11. Write a program in C to show the difference between Ptr+1 vs *ptr+1