C Programming – Lab Report IV

1. *Write a program to find factorial of a number using recursion.*

2. *Write a program to find the sum of 1+11+111+1111+… using recursive function. Ask users the number of terms. For example, if users say 4, find the sum of 1+11+111+1111.*

3. *Write a program to find* $\boldsymbol{n^{th}}$ *term of Fibonacci series using recursive function.*

4. *Write a program to generate Fibonacci series using recursive function.*

5. *Write a program to find power of a number using recursive function.*

6. *Write a program to find sum of digit of number using recursive function. For example, if user gives 482, then calculate 4+8+2.*

7. *Write a program to find HCF (GCD) and LCM using recursive function.*

8. *Write a program to reverse a number using recursive function.*

9. *Write a program to find sum of natural numbers using recursion.*

10. *Write a program to count digits of a given number using recursion.*

11. *Write a program to check whether a given number is prime or not using recursion.*

12. *Write a program to add & subtract two complex numbers* $(\boldsymbol{x + i * y})\&\ (\boldsymbol{a + i * b})$ *using function.*

13. *Write a program to sort a set of* $\boldsymbol{n}$ *numbers in ascending order using function.*

14. *Write a program using function to circularly shift their values given three variables x, y, and z. In other words, if* $\boldsymbol{x = 5, y = 9, and\ z = 8}$*; after circular shift the result needs to be* $\boldsymbol{y = 5, z = 9, and\ x = 8}$*. Call the function with variables a, b, and c to circularly shift their values.*

15. *Write a program to multiply two matrices (if possible) using function.*