1. Write a program to find roots of a quadratic equation using if else ladder.

2. Write a program to implement arithmetic calculator to perform addition, subtraction, multiplication, division and modulo operation using switch case.

3. Write a program to check whether the entered number is prime or not using for loop.

4. Write a program to print the following pattern.

    A B C D C B A
     A B C B A
      A B A
       A

5. Write a program to find whether the entered number is armstrong number or not using while loop.

6. Write a program to find binary equivalent of decimal number using do while loop.

7. Write a program to find largest and second largest element of an array.

8. Write a program to perform multiplication of two (M*N) matrices.

9. Write a program to find value of BIO using function, where BIO is defined as BIO= n!/(r!(n-r)!), n and r are natural numbers.

10. Write a program to find out GCD and LCM of two given numbers, using recursive function.

11. Write a program to check whether entered string is palindrome or not

12. Write a program to accept N elements of an array and to sort and display them in ascending order using function.

13. Write a program to calculate and display sum of all the elements except diagonal elements of the matrix using function.

14. Write a program to concatenate first, middle and last name using function.

15. Write a program to swap two numbers using call by address.

16. Write a program using pointers to display the contents of an array in reverse order.

17. Define a structure called Player with data members: Player name, team name, batting average. Create array of objects, store information about players, sort and display information of players in descending order of batting average.

18. Write a program to copy the contents of one file to another file.

19. Write a program to accept two numbers from user and check whether which is largest or equal using nested if else structure.
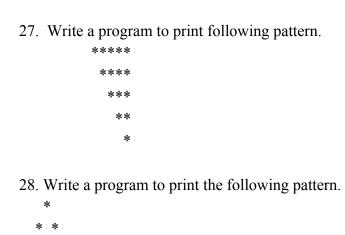
20. Write a program to print the following pattern.

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

21. Write a program to print following pattern.

```
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

22. Write a program to print following pattern.

```
A
A B
A B C
A B C D
A B C D E
```

23. Write a program to find addition of two (M*N) matrices.

24. Write a program to find subtraction of two (M*N) matrices.

25. Define a structure called Employee with data members: Employee name, age of employee Salary, Date of joining. Create array of objects, store information about employees, sort and display information of employee in descending order of salary. Display the information in tabular format.

26. Write a program to print following pattern.

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

27. Write a program to print following pattern.

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

28. Write a program to print the following pattern.

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

29. Write a program to copy contents of one file to another and convert it in upper case letters.