11. write a program for matrix addition?

```
Scanner input = new Scanner(System.in);
int mat1[][] = {{1,2}, {5,3}};
int mat2[][] = {{2,3}, {4,1}};
int mat-sum[][] = new int[2][2];
for(int i=0; i<len; i++)
{
    for(int j=0; j<len; j++)
    {
        mat-sum[i][j] = mat1[i][j] + mat2[i][j];
        System.out.print(mat-sum[i][j] + "1t");
    }
    System.out.println();
}
```

12. write a program rectangle symbol pattern.

```
Class rightriangle pattern
{
    Public static void main(String args[])
    {
        int i, j, row=6;
        for(i=0; i<row; i++)
        {
            for(i=0; j<=i; j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
    }
}
```

13. write a program that would sort a list of names in alphabetics order Asending or descending . choice get from that user?

```
Scanner input = new Scanner (System.in);
String arr [] = {"Banana", "Apple", "Carrot", "Reddish", "jackly};
int len = arr.length ;
Char order = input.next() . charAt(0);
is (order == 'A') {
    for (int i=0; i<len ; i++) {
       for (int j=i+1; j<arr.length; j++) {
          String temp = arr[i];
          arr[i] = arr[j];
          arr[i] = temp;
       }
    }
    System.out.print ln (Arrays.tostring(arr));
}
else if (order == 'D') {
    for (int i=0; i<len ; i++) {
       for (int j=i+1; j<arr.length; i++) {
          if (arr[i].compare (arr[j]) <0) {
             String temp = arr[i];
             arr[i] = arr[j];
             arr[j] = temp;
          }
       }
    }
    System.out.print ln (Arrays.tostring(arr));
```

14. write a program to matrix multiplication?

```
Scanner input = new Scanner (System.in);
int r = input.next Int();
int c = input.next Int();
int mat1[][] = new int [r][c];
int mat 2[][] = new int [r][c];
for (int i=0; i<r; i++)
{
   for (int j=0; j<c; j++)
```

```
        Sum [i][j] = new int [r][c];
    for (int i=0; i<r; i++)
    {
        for (int j=0; j<c; j++)
        {
            for (int k=0; k<c; k++)
            {
                Sum [i][j] = sum [i][j] + (mat1 [i][k] * mat2 [k][j]);
            }
            System.out.print (sum[i][j] + "\t");
        }
        System.out.println();
    }
```

15. Write a program to print the following Pattern.

```
Scanner input = new Scanner (system.in);
System.out.print ("Enter the number to be printed:");
int a=input.next Int ();
System.out.print ("Max number of the time printed:");
int n=input.next Int ();
for (int i=1; i<=n; i++)
{
    for (int j=1; j<=i; j++)
    {
        System.out.print(a);
    }
    System.out.println();
}
for (int i=n-1; i>=1; i--)
{
    for (int j=1; j<=i; j++)
        System.out.println();
}
```

16. Write a program to print the special characters seperately and print number of special characters into line?

```
Scanner input = new Scanner (System.in);
String s = input.next line ();
int len = s. length ();
char a[] = new charT[len];
int sp = 0;
for (int i = 0; i < len; i++)
{

    a[i] = s. char At (i);
    if (a[i] >= 65 && a[i] <= 90 || a[i] >= 97 &&(8) a[i] <= 122 ||
            a[i] >= 48 && a[i] <= 57)
        {

        }
    else
        {
            sp++;
        } System -out . print a[i]);
    }
        System .out. print ln ( "\n" + sp);
```

17. Write a program to print all the composite number between a and b?

```
Scanner input = new scanner (System.in);
int a = input.next Int ();
int b = input.next Int ();
for (int i = a+1; i <= b; i++)
{
    if (i % j == 0)
        c++;
    }
    if (c > 2)
        System .oct. print (i+" ");
```

18. Write a Program to print the inverted full pyramid pattern?

```
Scanner input = new Scanner (System.In);
int n = input.nextInt();
for (int i = n; i >= 1; i--)
{
    for (int j = 0; j < n-i; j++)
    {
        System.out.print(" ");
    }
    for (int k = 1; k <= i; k++)
    {
        System.out.print(" ");
    }
    System.out.println();
}
```

19. Find the Mean, Meadium, Mode of the array of numbers?

```
Scanner input = new Scanner (System.in);
int a[] = {16, 18, 27, 16, 23, 21, 19};
int len = a.length;
int sum = 0;
for (int i = 0; i < len; i++)
{
    sum = sum + a[i];
}
int mean = sum / len;
System.out.println("mean : " + mean);
for (int i = 0; i < len; i++)
{
    for (int j = i+1; j < len; j++)
    {
        if (a[i] < a[j])
        {
            int temp = a[i];
            a[i] = a[j];
            a[j] = temp;
        }
    }
    for (int i = 0; i < len; i++)
    {
        if (len % 2 == 0)
        {
            int mid = len / 2;
```

```java
System.out.print("median: "+a[mid-1]);
break;
}
else.
{
    int mid=(len+1)/2;
    System.out.print(mid);
    System.out.println("median:" a[mid-1]);
    break;
}}

for (int i =0; i <len; i++)
{
    for(int j =i+1; j <len; j++)
    {
        if (a[i] == a[j])
        {
            System.out.println("mode :"+a[i]);
            break;
        }
    }
}

20. Find the factorial of n?

Scanner input =new Scanner(System.in);
    int n =input.nextInt();
    int fact =1;
    for (int i=1; i<=n; i++)
    {
        fact = fact * i;
    }
    System.out.print(fact);
}
```