1. Write a program to reverse a word using loop? (Not to use inbuilt functions)
   Sample Input:
   String: TEMPLE
   Sample Output:
   Reverse String: ELPMET

```java
Scanner input=new Scanner(System.in);
String name=input.nextLine();
String empty="";
int len=name.length();
for(int i=len-1;i>=0;i--)
{
    empty=empty+name.charAt(i);
}
System.out.print(empty);
```

2. Write a program to check the entered user name is valid or not. Get both the inputs from the user.

     Sample Input

             Enter the user name: Saveetha@789

             Reenter the user name: Saveetha@123

       Sample Output:

             User name is Invalid

```java
Scanner input=new Scanner(System.in);
String s1=input.nextLine();
String s2=input.nextLine();
if(s1==s2)
    System.out.print("user name valid");
else
    System.out.print("user name Invalid");
```

3. Write a program to reverse a number using loop?(Get the input from user)
   Sample Input:
   Number: 14567
   Sample Output:
   Reverse Number: 76541

```java
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int rev=0;
while(n!=0)
{
    int rem=n%10;
    rev=rev*10+rem;
    n=n/10;
```

```
}
System.out.print(rev);
```

4. Write a program to find whether the person is eligible for vote or not. And if that particular person is not eligible, then print how many years are left to be eligible.
   Sample Input:
       Enter your age:
       7
       Sample output:
       You are allowed to vote after 11 years

```java
Scanner input=new Scanner(System.in);
int age=input.nextInt();
if(age>18)
    System.out.print("you are eligible for vote");
else if(age<=0)
    System.out.print("Enter the age correctly");
else
    System.out.print("you are allowed to vote after"+(18-age));
```

5. Find the LCM and GCD of n numbers?
   Sample Input:
   N value = 2
   Number 1 = 16
   Number 2 = 20
   Sample Output:
   LCM = 80
   GCD = 4

```java
import java.util.Scanner;
public class ak
{
    static int gcd(int a,int b)
    {
        if(a==0)
            return b;
        return gcd(b%a,a);
    }
    static int findgcd(int a[], int n)
    {
        int res=a[0];
        for(int i=0;i<n;i++)
        {
            res=gcd(res,a[i]);
            if(res==1)
                return 1;
        }
        return res;
    }
    public static void main(String[] args)
    {
        Scanner input=new Scanner(System.in);
```

```
        int n=input.nextInt();
        int a[]=new int[n];
        for(int i=0;i<n;i++)
        {
            a[i]=input.nextInt();
        }
        System.out.println(findgcd(a,n));
        int gcd=findgcd(a,n);
        int mul=1;
        for(int i=0;i<n;i++)
        {
            mul=mul*a[i];
        }
        int lcm=mul/gcd;
        System.out.println(lcm);
    }
}
```

6. Write a program to print Right Triangle Star Pattern

Sample Input:: n = 5

Output:

        *

       * *

      * * *

     * * * *

    * * * * *

```
Scanner input = new Scanner(System.in);
int n=5;
for(int i=1;i<=5;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();
}
```

7. Write a program to print the below pattern?

                    1

                1   1

            1   2   1

```
              1     3     3     1
           1     4     6     4     1
```

```
Scanner input=new Scanner(System.in);
int n=input.nextInt();
for(int i=1;i<=n;i++)
{
    int a=1;
    for(int s=1;s<=n-i;s++)
    {
        System.out.print(" ");
    }
    for(int j=1;j<=i;j++)
    {
        System.out.print(a+" ");
        a=a*(i-j)/j;
    }
    System.out.println();
}
```

8. Write a program using function to calculate the simple interest. Suppose the customer is a senior citizen. He is being offered 12 percent rate of interest; for all other customers, the ROI is 10 percent.

Sample Input:
      Enter the principal amount: 200000
      Enter the no of years: 3
      Is customer senior citizen (y/n): n

Sample Output:
      Interest: 60000

```
Scanner input = new Scanner(System.in);
int pri=input.nextInt();
int year=input.nextInt();
char age=input.next().charAt(0);
double interest=0.0;
if(age=='y')
{
    interest=(pri*year*0.12)/100;
    System.out.print(interest);
}
else
{
    interest=(pri*year*0.1)/100;
    System.out.print(interest);
}
```

9. Java Program to Find Even Sum of Fibonacci Series Till number N?

Sample Input: n = 4

Sample Output: 33

(N = 4, So here the fibonacci series will be produced from 0th term till 8th term:0, 1, 1, 2, 3, 5, 8, 13, 21

Sum of numbers at even indexes = 0 + 1 + 3 + 8 + 21 = 33)

```java
int n=input.nextInt();
int a1=0,a2=1,a3;
int a[]=new int[50];
for(int i=0;i<10;i++)
{
    a[i]=a1;
    System.out.print(a[i]+" ");
    a3=a1+a2;
    a1=a2;
    a2=a3;
}
int sum=0;
for(int i=0;i<=n*2;i=i+2)
{
    sum=sum+a[i];
}
System.out.println("\nSum: "+sum);
```

10. Write a program to print the numbers from M to N by skipping K numbers in between?
    Sample Input:
    M = 50
    N = 100
    K = 7
    Sample Output:
    50, 58, 66, 74, …..

```java
Scanner input = new Scanner(System.in);
int m=input.nextInt();
int n=input.nextInt();
int k=input.nextInt();
for(int i=m;i<=n;i=i+k+1)
{
    System.out.print(i+" ");
}
```

11. Write a program for matrix addition?

    Sample Input:
    Mat1 = 1 2
           5 3
    Mat2 = 2 3
           4 1

Sample Output:
Mat Sum = 3   5

9   4

```
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];
int len=mat1.length;
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]+"\t");
    }
    System.out.println();
}
```

12. Write a program to print rectangle symbol pattern.
Get the symbol as input from user

13. Write a program that would sort a list of names in alphabetical order Ascending or
Descending, choice get from the user?
Sample Input:
Banana
Carrot
Radish
Apple
Jack
Order(A/D) : A
Sample Output:
Apple
Banana
Carrot
Jack
Radish

```
Scanner input = new Scanner(System.in);
String arr[] = {"Banana", "Apple", "Carrot", "Radish", "Jack"};
int len = arr.length;
char order = input.next().charAt(0);
if (order == 'A') {
    for (int i = 0; i < len; i++) {
        for (int j = i + 1; j < arr.length; j++) {
            if (arr[i].compareTo(arr[j]) > 0) {
                String temp = arr[i];
                arr[i] = arr[j];
```

```
                arr[j] = temp;
            }
        }
    }
    System.out.println(Arrays.toString(arr));
}

else if (order == 'D') {
    for (int i = 0; i < len; i++) {
        for (int j = i + 1; j < arr.length; j++) {
            if (arr[i].compareTo(arr[j]) < 0) {
                String temp = arr[i];
                arr[i] = arr[j];
                arr[j] = temp;
            }
        }
    }
    System.out.println(Arrays.toString(arr));
}
```

14. Write a program for matrix multiplication?

Sample Input:
Mat1 = 1 2
5 3
Mat2 = 2   3
    4   1
Sample Output:
Mat Sum = 10   5
        22   18

```
23 Scanner input=new Scanner(System.in);
    int r=input.nextInt();
    int c=input.nextInt();
    int mat1[][]=new int[r][c];
    int mat2[][]=new int[r][c];

    for(int i=0;i<r;i++)
    {
        for(int j=0;j<c;j++)
        {
            mat1[i][j]=input.nextInt();
        }
    }
    for(int i=0;i<r;i++)
    {
        for(int j=0;j<c;j++)
        {
            mat2[i][j]=input.nextInt();
        }
    }
    int sum[][]=new int[r][c];
    for(int i=0;i<r;i++)
    {
        for(int j=0;j<c;j++)
        {
            sum[i][j]=0;
            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

Sample Input:

Enter the number to be printed: 1

Max Number of time printed: 3

1

11

111

11

1

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

16. Write a program to print the special characters separately and print number of Special characters in the line?

```java
Scanner input=new Scanner(System.in);
String s=input.nextLine();
int len=s.length();
char a[]=new char[len];
```

```java
int sp=0;
for(int i=0;i<len;i++)
{
    a[i]=s.charAt(i);
    if(a[i]>=65 && a[i]<=90 ||a[i]>=97 &&a[i]<=122
        || a[i]>=48 && a[i]<=57)
    {
    }
    else
    {
        sp++;
        System.out.print(a[i]);
    }
}
System.out.println("\n"+sp);
```

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

Sample Input:
A = 12
B = 19
Sample Output
14, 15, 16, 18

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

18. Write a program to print the Inverted Full Pyramid pattern?

```java
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, Median, Mode of the array of numbers?

Sample Input;:

Array of elements = {16, 18, 27, 16, 23, 21, 19}

Sample Output:

Mean = 20

Median = 19

Mode = 16

```java
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;
        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?

Sample Input:

N = 4

Sample Output:

4 Factorial = 24

Test cases:

1. N = 0
2. N = -5
3. N = 1
4. N = Q
5. N = 3A

```java
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);
}
```

21. Write a program to print the following pattern

Sample Input:

Enter the Character to be printed: %

Max Number of time printed: 3

%

% %

% % %

```java
Scanner input=new Scanner(System.in);
char c=input.next().charAt(0);
int n=input.nextInt();
for(int i=1;i<=n;i++)
{
    for(int j=1;j<=i;j++)
    {
        System.out.print(c);
    }
    System.out.println();
}
```

22. Find the year of the given date is leap year or not
Sample Input:
Enter Date: 04/11/1947
Sample Output:
Given year is Non Leap Year

```java
import java.util.Scanner;
public class ak
{
    public static void main(String[] args)
    {
        Scanner input=new Scanner(System.in);
        System.out.print("Enter year: ");
        String year=input.next();
        String a[]=year.split("/");
        String d=a[2];
        int num=Integer.parseInt(d);
        if((num%4==0 && num%100!=0)|| num%400==0)
            System.out.println("It is a leap year");
        else
            System.out.println("Not a leap year");
    }
}
```

Test cases:
1. 04/11/19.47
2. 11/15/1936
3. 31/45/1996
4. 64/09/1947
5. 00/00/2000

23. Find the number of factors for the given number
Sample Input:
Given number: 100
Sample Output:
Number of factors = 9

```java
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int factors=0;
for(int i=1;i<=n;i++)
{
    if(n%i==0)
        factors=factors+1;
}
System.out.print("Number of factors = "+factors);
1. Scanner input=new Scanner(System.in);
int n=input.nextInt();
```

```
int factors=0;
for(int i=1;i<=n;i++)
{
    if(n%i==0)
        factors++;
}
System.out.print(factors);
```

24. Write a program to print the given number is Perfect number or not?
    Sample Input:
    Given Number: 6
    Sample Output:
    It's a Perfect Number

```
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int factors=0;
for(int i=1;i<n;i++)
{
    if(n%i==0)
        factors=factors+i;
}
if(n==factors)
    System.out.print("It's a perfect number");
```

25. Write a program to print the number of vowels in the given statement?
    Sample Input:
    Saveetha School of Engineering
    Sample Output:
    Number o vowels = 12

```
Scanner input=new Scanner(System.in);
String name=input.nextLine();
int len=name.length();
char a[]=new char[len];
int vow=0;
for(int i=0;i<len;i++)
{
    a[i]=name.charAt(i);
    if(a[i]=='a'||a[i]=='e'||a[i]=='i'||a[i]=='o'||a[i]=='u'
      ||a[i]=='A'||a[i]=='E'||a[i]=='I'||a[i]=='O'||a[i]=='U')
        vow=vow+1;
}
System.out.println(vow);
```

Write a program to print hollow square symbol pattern?

Get the symbol from user.

```
Scanner input=new Scanner(System.in);
int n=5;
char c=input.next().charAt(0);
for(int i=1;i<=n;i++)
{
    for(int j=1;j<=n;j++)
    {
        if(i==1||j==1||i==n||j==n)
            System.out.print(c+" ");
        else
            System.out.print("  ");
    }
    System.out.println();
}
```

26. Write a program to print consonants and vowels separately in the given
word

Sample Input:

Given Word: Engineering

Sample Output:

Consonants: n g n r n g

Vowels: e i e ei

```
Scanner input=new Scanner(System.in);
String name=input.nextLine();
int len=name.length();
char a[]=new char[len];
char vow[]=new char[len];
char con[]=new char[len];
int v=0,c=0;
for(int i=0;i<len;i++)
{
    a[i]=name.charAt(i);
    if(a[i]=='a'||a[i]=='e'||a[i]=='i'||a[i]=='o'||a[i]=='u'
      ||a[i]=='A'||a[i]=='E'||a[i]=='I'||a[i]=='O'||a[i]=='U') {
        vow[v] = a[i];
        v++;
    }
    else {
        con[c] = a[i];
        c++;
    }
}
System.out.print("Consonants: ");
for(int i=0;i<v;i++)
{
    System.out.print(vow[i]);
}
System.out.print("\nvowels: ");
for(int j=0;j<c;j++)
{
    System.out.print(con[j]);
}
```

27. Write a program to print the Fibonacci series.

Sample Input:
        Enter the n value: 6
Sample Output:
        0   1   1   2   3   5
Test Condition: Implement negative Fibonacci series

```
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int a1=0,a2=1;
for(int i=0;i<n;i++)
{
    System.out.print(a1+" ");
    int a3=a1+a2;
    a1=a2;
    a2=a3;
}
```

Write a program to print the below pattern

1

2 2

3 3 3

4 4 4 4

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

28. Write a program to find the square, cube of the given decimal number
Sample Input:
Given Number: 0.6
Sample Output:
Square Number: 0.36
Cube Number:0.216

```
Scanner input=new Scanner(System.in);
float n=input.nextFloat();
System.out.print("square: "+(n*n));
System.out.print("cube: "+(n*n*n));
```

29. Program to find the frequency of each element in the array.

Sample Input & Output:

{1, 2, 8, 3, 2, 2, 2, 5, 1}

```
Element | Frequency
-------------------------
1       |     2
2       |     4
8       |     1
3       |     1
5       |     1
```

```java
import java.util.Arrays;
import java.util.Scanner;
public class ak {
    public static void main(String[] args)
    {
        Scanner input=new Scanner(System.in);
        int a[]=new int[] {1,2,8,3,2,2,2,5,1};
        int t[]=new int[a.length];
        int visited=-1;
        for(int i=0;i<a.length;i++)
        {
            int count=1;
            for(int j=i+1;j<a.length;j++)
            {
                if(a[i]==a[j])
                {
                    count++;
                    t[j]=visited;
                }
            }
            if(t[i]!=visited)
                t[i]=count;
        }
        for(int i=0;i<a.length;i++)
        {
            if(t[i]!=visited)
                System.out.println(a[i]+"   "+t[i]);
        }
    }
}
```

30. Write a program to print the given number is Perfect number or not?
Sample Input:
Given Number: 6
Sample Output:
It's a Perfect Number

```java
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int factors=0;
```

```
for(int i=1;i<n;i++)
{
    if(n%i==0)
        factors=factors+i;
}
if(n==factors)
    System.out.print("It's a perfect number");
```

31. Find the factorial of n?
 Sample Input:
 N = 6
 Sample Output:
         6   Factorial = 720

```
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(n+" factorial = "+fact);
```

32. Write a program to print the below pattern
   1
   4   9
   16 25   36
   49 64   81   100

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

33. Write a program to find the number of composite numbers in an
     array of elements
      Sample Input;:

Array of elements = {16, 18, 27, 16, 23, 21, 19}

Sample Output:

Number of Composite Numbers = 5

```java
Scanner input=new Scanner(System.in);
int arr[]={16,18,27,16,23,21,19};
int len=arr.length;
int count=0;
for(int i=0;i<len;i++)
{
    int c=0;
    for(int j=1;j<100;j++)
    {
        if(arr[i]%j==0)
        {
            c++;
        }
    }
    if(c>2)
        count++;
}
System.out.println(count);
```

Test cases:

34. Find the nth odd number after n odd number

Sample Input:

N : 4

Sample Output:

4th Odd number after 4 odd numbers = 15

```java
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int arr[]=new int[100];
int j=1;
for(int i=1;i<100;i++)
{
    if(i%2!=0) {
        arr[j] = i;
        j++;
    }
}
System.out.print(arr[n*2]);
```

35. Write a program that finds whether a given character is present in a string or not. In case it is present it prints the index at which it is present. Do not use built-in find functions to search the character.

Sample Input:

Enter the string: I am a programmer

Enter the character to be searched: p

Sample Output:

       P is found in string at index: 8

Note: Check for non available Character in the given statement as Hidden Test case.

```java
Scanner input=new Scanner(System.in);
String str=input.nextLine();
 char c=input.next().charAt(0);
char arr[]=new char[str.length()];
int len=str.length();
int x=0;
for(int i=0;i<len;i++)
{
    arr[i]=str.charAt(i);
    if(arr[i]==c)
    {
        System.out.println(c+" is found in string at index: "+(i+1));
        x=1;
    }
}
if(x==0)
    System.out.print("character not found");
```

36. Write a program to print the below pattern

1

2 2

3 3 3

4 4 4 4

3 3 3

2 2

 1

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

```
        {
            System.out.print(i);
        }
        System.out.println();
}
```

37. Program to find whether the given number is Armstrong number or not
Sample Input:
Enter number : 153
Sample Output:
Given number is Armstrong number

```
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int num1=n;
int arm=0;
while(num1!=0)
{
    int rem=num1%10;
    arm=arm+(rem*rem*rem);
    num1=num1/10;
}
if(n==arm)
    System.out.print("Armstrong number");
else
    System.out.print("Not Armstrong");
```

38. Write a program to arrange the letters of the word alphabetically in reverse order
Sample Input:
Enter the word : MOSQUE
Sample Output:
    Alphabetical Order: U S Q O M E

```
import java.util.Scanner;
import java.util.Arrays;
public class ak
{
    public static void main(String args[])
    {
        Scanner input=new Scanner(System.in);
        String name=input.nextLine();
        int len=name.length();
        char arr[]=new char[len];
        String Alpha;
        for(int i=0;i<len;i++)
        {
            arr[i]=name.charAt(i);
        }
        Arrays.sort(arr);
        for(int i=len-1;i>=0;i--)
        {
            System.out.print(arr[i]+" ");
```

```
        }
    }
}
```

39. Write a program that accepts a string from user and displays the same string after removing vowels from it.
    Sample Input & Output:
        Enter a string: we can play the game
    The string without vowels is: w cn ply thgm

```
Scanner input=new Scanner(System.in);
String name=input.nextLine();
String n1=name.replaceAll("[aeiouAEIOU]","");
System.out.println(n1);
```

40. Write a program to print hollow SquareDollar pattern?

```
public static void main(String args[])
{
    Scanner input=new Scanner(System.in);
    int n=input.nextInt();
    for(int i=0;i<n;i++)
    {
        for(int j=0;j<n;j++)
        {
            if(i==0||j==0||i==n-1||j==n-1)
                System.out.print("$ ");
            else
                System.out.print("  ");
        }
        System.out.println();
    }
```

41. Write a program to find the sum of digits of N digit number (sum should be single digit)
    Sample Input:
    Enter N value : 3
    Enter 3 digit number: 143
    Sample Output:
    Sum of 3 digit number: 8

```
Scanner input=new Scanner(System.in);
int n=input.nextInt();
int sum=0;
while(n!=0)
```

```
{
    int rem=n%10;
    sum=sum+rem;
    n=n/10;
}
System.out.println(sum);
```

42. Write a program to find the square root of a perfect square number(print both the positive and negative values)

Sample Input:

Enter the number : 6561

Sample Output:

Square Root: 81, -81

```
import java.util.Scanner;
import java.lang.Math;
public class ak
{
    public static void main(String args[])
    {
        Scanner input=new Scanner(System.in);
        double n=input.nextInt();
        double sqrt=Math.pow(n,0.5);
        double sq=Math.sqrt(n);
        System.out.println(sqrt+","+"-"+sqrt);

    }
}
```

43. Write a program for matrix multiplication?

Sample Input:

Mat1 = 1 2

5 3

Mat2 = 2   3

4   1

Sample Output:

Mat Sum = 10   5

22   18

```
Scanner input=new Scanner(System.in);
int r=input.nextInt();
int c=input.nextInt();
int mat1[][]=new int[r][c];
```

```java
int mat2[][]=new int[r][c];

for(int i=0;i<r;i++)
{
    for(int j=0;j<c;j++)
    {
        mat1[i][j]=input.nextInt();
    }
}
for(int i=0;i<r;i++)
{
    for(int j=0;j<c;j++)
    {
        mat2[i][j]=input.nextInt();
    }
}
int sum[][]=new int[r][c];
for(int i=0;i<r;i++)
{
    for(int j=0;j<c;j++)
    {
        sum[i][j]=0;
        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();
}
```

44. Write a program to print inverted pyramid pattern.

```java
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();
}
```