

1. Write a program to reverse a word using loop? (Not to use inbuilt functions) Sample

Input: String: TEMPLE Sample Output:

Reverse String: ELPMET

```
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

```
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

```
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

```
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

```
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)

```
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,

```
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


```
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();
}
```