```
import java.util.*;
class frequency
	{
	public static void main(String args[]){
		Scanner sc=new Scanner(System.in);
		System.out.println("Enter the sentence");
		String sen=sc.nextLine();
		System.out.println("Enter the letter to check frequency");
		String let=sc.nextLine();
		int count=0;
		for(int i=0;i<sen.length();i++){
			if(sen.charAt(i)==let.charAt(0))
				count++;
		}
		System.out.println("frequency of the letter "+let.charAt(0)+" = "+count+" ");
	}
 }
```

Output :-

```
Enter the sentence
allahabad
Enter the letter to check frequency
a
frequency of the letter a = 4
```

```
import java.util.*;
class matrix
{
	public static void main(String args[])
	{
	Scanner s=new Scanner(System.in);

	System.out.println("Enter the order of first matrix");
	System.out.println("Enter number of row of first matrix");
	int m=s.nextInt();
	System.out.println("Enter number of column of first matrix");
	int n=s.nextInt();

	System.out.println("Enter the order of second matrix");
	System.out.println("Enter number of row of second matrix");
	int p=s.nextInt();
	System.out.println("Enter number of column of second matrix");
	int q=s.nextInt();
```

```
if(n!=p)
{
	System.out.println("matrix multiplication not possible");
	return;
}

int A[][]=new int[m][n];
int B[][]=new int[p][q];
int res[][]=new int[m][q];

System.out.println("Enter the first matrix");
for(int i=0;i<m;i++)
	{
		for(int j=0;j<n;j++)
		{
		System.out.println("Enter element("+(i+1)+","+(j+1)+")");
		A[i][j]=s.nextInt();
		}
	}
System.out.println("first matrix:");
for(int i=0;i<m;i++)
	{
		for(int j=0;j<n;j++)
		{
		System.out.print(A[i][j]+" ");
		}
		System.out.println("");
	}

System.out.println("Enter the second matrix");
for(int i=0;i<p;i++)
	{
		for(int j=0;j<q;j++)
		{
		System.out.println("Enter element("+(i+1)+","+(j+1)+")");
		B[i][j]=s.nextInt();
		}
	}
System.out.println("Second matrix:");
for(int i=0;i<p;i++)
	{
		for(int j=0;j<q;j++)
		{
		System.out.print(B[i][j]+" ");
		}
		System.out.println("");
	}
System.out.println("Matrix multiplication is");
for(int i=0;i<m;i++)
{
	for(int j=0;j<q;j++)
	{
```

```
                        int sum=0;
                        for(int k=0;k<n;k++)
                        {
                                sum=sum+((A[i][k])*(B[k][j]));
                        }
                        res[i][j]=sum;
                }
        }
        System.out.println("Multiplied matrix:");
        for(int i=0;i<m;i++)
        {
                for(int j=0;j<q;j++)
                {
                System.out.print(res[i][j]+" ");
                }
                System.out.println("");
        }
        }
}
```

Output :-

```
Enter the order of first matrix
Enter number of row of first matrix
2
Enter number of column of first matrix
3
Enter the order of second matrix
Enter number of row of second matrix
3
Enter number of column of second matrix
2

Enter the first matrix
Enter element(1,1)
1
Enter element(1,2)
2
Enter element(1,3)
3
Enter element(2,1)
4
Enter element(2,2)
5
Enter element(2,3)
6
first matrix:
1 2 3
```

```
4 5 6

Enter the second matrix
Enter element(1,1)
1
Enter element(1,2)
2
Enter element(2,1)
3
Enter element(2,2)
4
Enter element(3,1)
5
Enter element(3,2)
6
Second matrix:
1 2
3 4
5 6

Matrix multiplication is
Multiplied matrix:
22 28
49 64
```

```
import java.util.*;
class string
{
	public static void main(String args[])
	{
	System.out.println("Enter a string");
	Scanner s=new Scanner(System.in);
	String a=s.nextLine();
	int b=a.length();
	int flag=0;
	System.out.println("length of the string is "+b);
	for(int i=0;i<=b/2;i++)
	{
		if(a.charAt(i)!=a.charAt(b-i-1))
		flag=1;
		break;
	}
	if(flag==0)
	System.out.println("It's palindrome");
	else
	System.out.println("It's not palindrome");
	}
}
```

Output :-

```
1)Enter a string
  apple
  length of the string is 5
  It's not palindrome

2)Enter a string
  malayalam
  length of the string is 9
  It's palindrome
```

```
import java.util.*;
class MethodOverloading{
  public static void main(String args[]){
    Areas obj = new Areas();
    int a;
    do{
    System.out.println("Choose your choice : \n1.Find area of Circle \n2.Find area of rectangle \n3.Find area of Triangle \n4.Quit");
    Scanner sca = new Scanner(System.in);
a = sca.nextInt();
switch(a){
case 1 : System.out.println("\nEnter the Radius of the Circle : ");
double r = sca.nextInt();
obj.area(r);
break;

case 2 : System.out.println("\nEnter the value of Height :");
double h = sca.nextInt();
System.out.println("\nEnter the value of Width :");
double w = sca.nextInt();
obj.area(w,h);
break;

case 3 : obj.area();
break;

case 4 :break;

default : System.out.println("\nWrong Input!!");
}
    }while(a != 4);
  }
}
```

```
class Areas{
Scanner sca = new Scanner(System.in);
void area(double r){
double ans = 3.14*(r*r);
System.out.println("\nArea of Circle is :"+ans+"\n");
}
void area(double w,double h){
double ans = w*h;
System.out.println("\nArea of Rectangle is :"+ans+"\n");
}
void area(){
System.out.println("\nEnter the value of base :");
double b = sca.nextInt();
System.out.println("\nEnter the value of Height :");
double h = sca.nextInt();
double ans = (b*h)/2;
System.out.println("\nArea of Triangle is :"+ans+"\n");
}
}
```

Output :-

```
Choose your choice :
1.Find area of Circle
2.Find area of rectangle
3.Find area of Triangle
4.Quit
1
Enter the Radius of the Circle :
3
Area of Circle is :28.26

Choose your choice :
1.Find area of Circle
2.Find area of rectangle
3.Find area of Triangle
4.Quit
2
Enter the value of Height :
5
Enter the value of Width :
2
Area of Rectangle is :10.0

Choose your choice :
1.Find area of Circle
2.Find area of rectangle
3.Find area of Triangle
```

4.Quit
3
Enter the value of base :
5
Enter the value of Height :
6
Area of Triangle is :15.0

Choose your choice :
1.Find area of Circle
2.Find area of rectangle
3.Find area of Triangle
4.Quit
4