```java
import java.util.Scanner;
import java.util.InputMismatchException;
class Calculator
{

    public void add(float a,float b, float c)
    {
        System.out.println(a+"+"+b+"+"+c+"="+(a+b+
    }
    public void add(float a,float b)
    {
        System.out.println(a+"+"+b+"="+(a+b));
    }


    public void subtract(float a,float b, float c)
    {
        System.out.println(a+"-"+b+"-"+c+"="+(a-b-
    }
    public void subtract(float a,float b)
    {
        System.out.println(a+"-"+b+"="+(a-b));
    }


    public void product(float a,float b)
    {
        System.out.println(a+"*"+b+"="+(a*b));
    }


    public void division(float a,float b)
    {
        System.out.println(a+"/"+b+"="+(a/b));
    }
}
public class Main
{
    public static void main (String[] args) {
        Calculator cal=new Calculator();
        Scanner sc=new Scanner(System.in);
        System.out.println("Name:pavan kumar");
        System.out.println ("sapid:51834695");
        try
        {
            System.out.println("1. ADD\n2. SUBTRAC
            int op=sc.nextInt();
```

```java
                    switch(op)
                    {
                        case 0:
                            System.out.println("Exit...");
                            System.exit(0);
                            break;
                        case 1:
                            System.out.print("Enter operan
                            float add1=sc.nextFloat();
                            System.out.print("Enter operan
                            float add2=sc.nextFloat();
                            System.out.print("Enter operan
                            float add3=sc.nextFloat();
                            if(add3==0)
                            {
                                cal.add(add1, add2);
                            }
                            else
                            {
                                cal.add(add1, add2, add3);
                            }
                            break;
                        case 2:
                            System.out.print("Enter operand
                            float sub1=sc.nextFloat();
                            System.out.print("Enter operan
                            float sub2=sc.nextFloat();
                            System.out.print("Enter operan
                            float sub3=sc.nextFloat();
                            if(sub3==0)
                            {
                                cal.subtract(sub1, sub2);
                            }
                            else
                            {
                                cal.subtract(sub1, sub2, s
                            }
                            break;
                        case 3:
                            System.out.print("Enter operan
                            float mul1=sc.nextFloat();
                            System.out.print("Enter operan
                            float mul2=sc.nextFloat();
                            cal.product(mul1,mul2);
                            break;
                        case 4:
                            System.out.print("Enter operan
```

```java
 93                             case 4:
 94                                 System.out.print("Enter operar
 95                                 float div1=sc.nextFloat();
 96                                 System.out.print("Enter operar
 97                                 float div2=sc.nextFloat();
 98                                 if(div2==0)
 99                                 {
100                                     throw new ArithmeticExcept
101                                 }
102                                 cal.division(div1,div2);
103                                 break;
104                             default:
105                                 System.out.println("Invalid ch
106                         }
107                     }
108                     catch(InputMismatchException ime)
109                     {
110                         System.out.println("You have entered i
111                     }
112                     catch(ArithmeticException ae)
113                     {
114                         System.out.println(ae.getMessage());
115                     }
116             }
117 }
```

```
Name:pavan kumar
sapid:51834695
1. ADD
2. SUBTRACt
3. MULTIPLICATION
4. DIVISION
5. EXIT
Enter your choice:
4
Enter operand 1: 10
Enter operand 2: 5
10.0/5.0=2.0

Process finished.
```

```java
public class Main
{
  public static boolean isPalindrome(String string,
  {
    if (low >= high) {
      return true;
    }

    if (string.charAt(low) != string.charAt(high))
      return false;
    }

    return isPalindrome(string, low + 1, high - 1);
  }

  public static void main(String[] args)
  {
    String string = "madam";

    if (isPalindrome(string, 0, string.length() - 1
      System.out.println("Name:pavan kumar");
      System.out.println ("Sap id:51834695");
      System.out.print("given String is Palindrome"
    } else {
      System.out.print("given String is Not Palindr
    }
  }
}
```

```
Name:pavan kumar
Sap id:51834695
given String is Palindrome
Process finished.
```

```java
import java.util.*;
public class Main
{
  public static void main (String[] args)
   {
      System.out.println("Name:pavan kumar");
      System.out.println ("Sap id:51834695");
      int count=0;
      int rem=0 ;
      Scanner sc=new Scanner(System.in);
      System.out.println("enter a number :");
      int n= sc.nextInt();
      while(n>0)
      {
         rem=n%10;
         if(rem%2!=0)
         {
            count++;
         }
         n=n/10;

      }
      System.out.println("no of odd digits in number
   }
}
```

```
Name:pavan kumar
Sap id:51834695
enter a number :
54
no of odd digits in number are ; 1

Process finished.
```

```java
import java.util.Arrays;

class Main
{
  public static void swap(int[] arr, int a, int b)
  {
    int temp = arr[a];
    arr[a] = arr[b];
    arr[b] = temp;
  }

  public static void bubbleSort(int[] arr, int m)
  {
    for (int a = 0; a < m - 1; a++) {
      if (arr[a] > arr[a + 1]) {
        swap(arr, a, a + 1);
      }
    }
    if (m - 1 > 1) {
      bubbleSort(arr, m - 1);
    }
  }

  public static void main(String[] args)
  {
    int[] arr = {10,3,9,50,4,25 };

    bubbleSort(arr, arr.length);

    System.out.println("Name:pavan kumar");
    System.out.println ("Sap id:51834695");
    System.out.println(Arrays.toString(arr));
  }
}
```

```
Name:pavan kumar
Sap id:51834695
[3, 4, 9, 10, 25, 50]

Process finished.
```