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

    public void subtract(float a,float b, float c)
```

```java
15
16      public void subtract(float a,float b, float c)
17      {
18          System.out.println(a+"-"+b+"-"+c+"="+(a-b-c));
19      }
20      public void subtract(float a,float b)
21      {
22          System.out.println(a+"-"+b+"="+(a-b));
23      }
24
25
26      public void product(float a,float b)
27      {
28          System.out.println(a+"*"+b+"="+(a*b));
29      }
30
```

```java
32       public void division(float a,float b)
33       {
34            System.out.println(a+"/"+b+"="+(a/b));
35       }
36  }
37  public class Main
38  {
39      public static void main (String[] args) {
40          Calculator cal=new Calculator();
41          Scanner sc=new Scanner(System.in);
42          System.out.println("Author: P.Kathyayani \nSAP ID:51834723");
43          try
44          {
45              System.out.println("1. ADD\n2. SUBTRACt\n3. MULTIPLICATION\n4. DIVISION\n5. EXIT\
46              int op=sc.nextInt();
47              switch(op)
```

```java
switch(op)
{
    case 0:
        System.out.println("Exit...");
        System.exit(0);
        break;
    case 1:
        System.out.print("Enter operand 1: ");
        float add1=sc.nextFloat();
        System.out.print("Enter operand 2: ");
        float add2=sc.nextFloat();
        System.out.print("Enter operand 3(if you want. else enter 0): ");
        float add3=sc.nextFloat();
        if(add3==0)
        {
            cal.add(add1, add2);
```

```java
64          else
65          {
66              cal.add(add1, add2, add3);
67          }
68          break;
69      case 2:
70          System.out.print("Enter operand 1: ");
71          float sub1=sc.nextFloat();
72          System.out.print("Enter operand 2: ");
73          float sub2=sc.nextFloat();
74          System.out.print("Enter operand 3(if you want. else enter 0): ");
75          float sub3=sc.nextFloat();
76          if(sub3==0)
77          {
78              cal.subtract(sub1, sub2);
79          }
```

```java
            }
            else
            {
                cal.subtract(sub1, sub2, sub3);
            }
            break;
        case 3:
            System.out.print("Enter operand 1: ");
            float mul1=sc.nextFloat();
            System.out.print("Enter operand 2: ");
            float mul2=sc.nextFloat();
            cal.product(mul1,mul2);
            break;
        case 4:
            System.out.print("Enter operand 1: ");
            float div1=sc.nextFloat();
            System.out.print("Enter operand 2: ");
```

```java
93              System.out.print("Enter operand 1: ");
94              float div1=sc.nextFloat();
95              System.out.print("Enter operand 2: ");
96              float div2=sc.nextFloat();
97              if(div2==0)
98              {
99                  throw new ArithmeticException("Number cannot be divided by zero!!");
100             }
101             cal.division(div1,div2);
102             break;
103         default:
104             System.out.println("Invalid choice: ");
105         }
106     }
107     catch(InputMismatchException ime)
108     {
109         System.out.println("You have entered input of wrong datatype!!");
```

```java
102                         break;
103                 default:
104                     System.out.println("Invalid choice: ");
105             }
106         }
107         catch(InputMismatchException ime)
108         {
109             System.out.println("You have entered input of wrong datatype!!");
110         }
111         catch(ArithmeticException ae)
112         {
113             System.out.println(ae.getMessage());
114         }
115     }
116
```

```
Author: P.Kathyayani
SAP ID:51834723
1. ADD
2. SUBTRACt
3. MULTIPLICATION
4. DIVISION
5. EXIT
Enter your choice:
1
Enter operand 1: 23
Enter operand 2: 34
Enter operand 3(if you want. else enter 0)
23.0+34.0=57.0

Process finished.
```

```java
public class Main
{
    public static boolean isPalindrome(String string, int low, int high)
    {
        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)
    {
```

```java
14      }
15
16      public static void main(String[] args)
17      {
18          String string = "madam";
19
20          if (isPalindrome(string, 0, string.length() - 1)) {
21              System.out.println("Author:P.Kathyayani \nSAP ID:51834723");
22              System.out.print("given String is Palindrome");
23          } else {
24              System.out.print("given String is Not Palindrome");
25          }
26      }
27  }
```

```
Author:P.Kathyayani
SAP ID:51834723
given String is Palindrome
Process finished.
```

```java
import java.util.*;
public class Main
{
  public static void main (String[] args)
  {
    System.out.println("Author :P.Kathyayani \n SAP ID:51834723");
    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)
      {
```

```java
12      while(n>0)
13      {
14        rem=n%10;
15        if(rem%2!=0)
16        {
17          count++;
18        }
19        n=n/10;
20
21      }
22      System.out.println("no of odd digits in number are ; "+count);
23
24    }
25 }
```

```
× Terminal                                    ⧉

Author :P.Kathyayani
 SAP ID:51834723
enter a number :
2345
no of odd digits in number are ; 2

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);
```

```java
17              }
18          }
19          if (m - 1 > 1) {
20              bubbleSort(arr, m - 1);
21          }
22      }

24      public static void main(String[] args)
25      {
26          int[] arr = { 5, 1, 7, 9, 8, 0, 2 };

28          bubbleSort(arr, arr.length);

30          System.out.println("Author:P.Kathyayani\n SAP ID:51834723");
31          System.out.println(Arrays.toString(arr));
32      }
33  }
```

```
Author:P.Kathyayani
 SAP ID:51834723
[0, 1, 2, 5, 7, 8, 9]

Process finished.
```

Attempts allowed: 1

This quiz opened at Wednesday, 22 July 2020, 3:00 PM

This quiz will close at Wednesday, 22 July 2020, 4:00 PM

Time limit: 30 mins

SUMMARY OF YOUR PREVIOUS ATTEMPTS

State	Marks / 20.00	Grade / 10.00	Review
Finished Submitted Wednesday, 22 July 2020, 3:59 PM	6.50	3.25	

YOUR FINAL GRADE FOR THIS QUIZ IS 3.25/10.00.