

```
1 import java.util.Scanner;
2 import java.util.InputMismatchException;
3 class Calculator
4 {
5
6     public void add(float a, float b, float c)
7     {
8         System.out.println(a+"+" +b+"+" +c+"=" +(a+b));
9     }
10    public void add(float a, float b)
11    {
12        System.out.println(a+"+" +b+"=" +(a+b));
13    }
14
15
16    public void subtract(float a, float b, float c)
17    {
18        System.out.println(a+" - " +b+" - " +c+"=" +(a-b));
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
31
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("Name:pavan kumar");
43         System.out.println ("sapid:51834695");
44         try
45         {
46             System.out.println("1. ADD\n2. SUBTRACT");
47             int op=sc.nextInt();
```



```
48         switch(op)
49         {
50             case 0:
51                 System.out.println("Exit...");  

52                 System.exit(0);
53                 break;
54             case 1:
55                 System.out.print("Enter operar");
56                 float add1=sc.nextFloat();
57                 System.out.print("Enter operar");
58                 float add2=sc.nextFloat();
59                 System.out.print("Enter operar");
60                 float add3=sc.nextFloat();
61                 if(add3==0)
62                 {
63                     cal.add(add1, add2);
64                 }
65                 else
66                 {
67                     cal.add(add1, add2, add3);
68                 }
69                 break;
70             case 2:
71                 System.out.print("Enter operand");
72                 float sub1=sc.nextFloat();
73                 System.out.print("Enter operar");
74                 float sub2=sc.nextFloat();
75                 System.out.print("Enter operar");
76                 float sub3=sc.nextFloat();
77                 if(sub3==0)
78                 {
79                     cal.subtract(sub1, sub2);
80                 }
81                 else
82                 {
83                     cal.subtract(sub1, sub2, s);
84                 }
85                 break;
86             case 3:
87                 System.out.print("Enter operar");
88                 float mul1=sc.nextFloat();
89                 System.out.print("Enter operar");
90                 float mul2=sc.nextFloat();
91                 cal.product(mul1,mul2);
92                 break;
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                 cal.divide(div1, div2);
99             default:
100                 System.out.println("Invalid operation");
101                 break;
102         }
103     }
104 }
```



```
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.

```
1 public class Main
2 {
3     public static boolean isPalindrome(String string,
4     {
5         if (low >= high) {
6             return true;
7         }
8
9         if (string.charAt(low) != string.charAt(high))
10            return false;
11     }
12
13    return isPalindrome(string, low + 1, high - 1);
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("Name:pavan kumar");
22         System.out.println ("Sap id:51834695");
23         System.out.print("given String is Palindrome");
24     } else {
25         System.out.print("given String is Not Palindr
26     }
27 }
28 }
```

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

```
1 import java.util.*;
2 public class Main
3 {
4     public static void main (String[] args)
5     {
6         System.out.println("Name:pavan kumar");
7         System.out.println ("Sap id:51834695");
8         int count=0;
9         int rem=0 ;
10        Scanner sc=new Scanner(System.in);
11        System.out.println("enter a number :");
12        int n= sc.nextInt();
13        while(n>0)
14        {
15            rem=n%10;
16            if(rem%2!=0)
17            {
18                count++;
19            }
20            n=n/10;
21        }
22        System.out.println("no of odd digits in number");
23    }
24}
25}
26}
```

Name:pavan kumar

Sap id:51834695

enter a number :

54

no of odd digits in number are ; 1

Process finished.

```
1 import java.util.Arrays;
2
3 class Main
4 {
5     public static void swap(int[] arr, int a, int b)
6     {
7         int temp = arr[a];
8         arr[a] = arr[b];
9         arr[b] = temp;
10    }
11
12    public static void bubbleSort(int[] arr, int m)
13    {
14        for (int a = 0; a < m - 1; a++) {
15            if (arr[a] > arr[a + 1]) {
16                swap(arr, a, a + 1);
17            }
18        }
19        if (m - 1 > 1) {
20            bubbleSort(arr, m - 1);
21        }
22    }
23
24    public static void main(String[] args)
25    {
26        int[] arr = {10,3,9,50,4,25 };
27
28        bubbleSort(arr, arr.length);
29
30        System.out.println("Name:pavan kumar");
31        System.out.println ("Sap id:51834695");
32        System.out.println(Arrays.toString(arr));
33    }
34 }
```

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

Process finished.