

1.

```
1
2  import java.util.Scanner;
3  import java.util.InputMismatchException;
4  class Calculator
5  {
6
7      public void add(float a, float b, float c)
8      {
9          System.out.println(a+"+"+b+"+"+c+"="+ (a+b+c));
10     }
11     public void add(float a, float b)
12     {
13         System.out.println(a+"+"+b+"="+ (a+b));
14     }
15
16
17     public void subtract(float a, float b, float c)
18     {
19         System.out.println(a+"-"+b+"-"+c+"="+ (a-b-c));
20     }
21     public void subtract(float a, float b)
22     {
23         System.out.println(a+"-"+b+"="+ (a-b));
24     }
25
26
27     public void product(float a, float b)
28     {
29         System.out.println(a+"*"+b+"="+ (a*b));
30     }
31
32
33     public void division(float a, float b)
34     {
35         System.out.println(a+"/"+b+"="+ (a/b));
36     }
37 }
38 public class Main
39 {
40     public static void main (String[] args) {
41         Calculator cal=new Calculator();
42         Scanner sc=new Scanner(System.in);
43         System.out.println("Author: P. jaganmohan\nSAP ID:5183");
44         try
45         {
46             System.out.println("1. ADD\n2. SUBTRACT\n3. MULTI");
47             int op=sc.nextInt();
48             switch(op)
49             {
50                 case 0:
51                     System.out.println("Exit...");
52                     System.exit(0);
53                     break;
54             }
55         }
56     }
57 }
```

```

53         break;
54     case 1:
55         System.out.print("Enter operand 1: ");
56         float add1=sc.nextFloat();
57         System.out.print("Enter operand 2: ");
58         float add2=sc.nextFloat();
59         System.out.print("Enter operand 3(if you want. e
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 1: ");
72         float sub1=sc.nextFloat();
73         System.out.print("Enter operand 2: ");
74         float sub2=sc.nextFloat();
75         System.out.print("Enter operand 3(if you want. e
76         float sub3=sc.nextFloat();
77         if(sub3==0)
78         {
79             cal.subtract(sub1, sub2);
80         }
81         else
82         {
83             cal.subtract(sub1, sub2, sub3);
84         }
85         break;
86     case 3:
87         System.out.print("Enter operand 1: ");
88         float mul1=sc.nextFloat();
89         System.out.print("Enter operand 2: ");
90         float mul2=sc.nextFloat();
91         cal.product(mul1,mul2);
92         break;
93     case 4:
94         System.out.print("Enter operand 1: ");
95         float div1=sc.nextFloat();
96         System.out.print("Enter operand 2: ");
97         float div2=sc.nextFloat();
98         if(div2==0)
99         {
100             throw new ArithmeticException("Number cann
101         }
102         cal.division(div1,div2);
103         break;
104     default:
105         System.out.println("Invalid choice: ");
106     }
107 }
108 catch(InputMismatchException ime)
109 {
110     System.out.println("You have entered input of wrong d
111 }
112 catch(ArithmeticException ae)
113 {
114     System.out.println(ae.getMessage());
115 }
116 }
117 }

```

Author: P. jaganmohan

SAP ID:51834796

1. ADD

2. SUBTRACT

3. MULTIPLICATION

4. DIVISION

5. EXIT

Enter your choice:

1

Enter operand 1: 45

Enter operand 2: 54

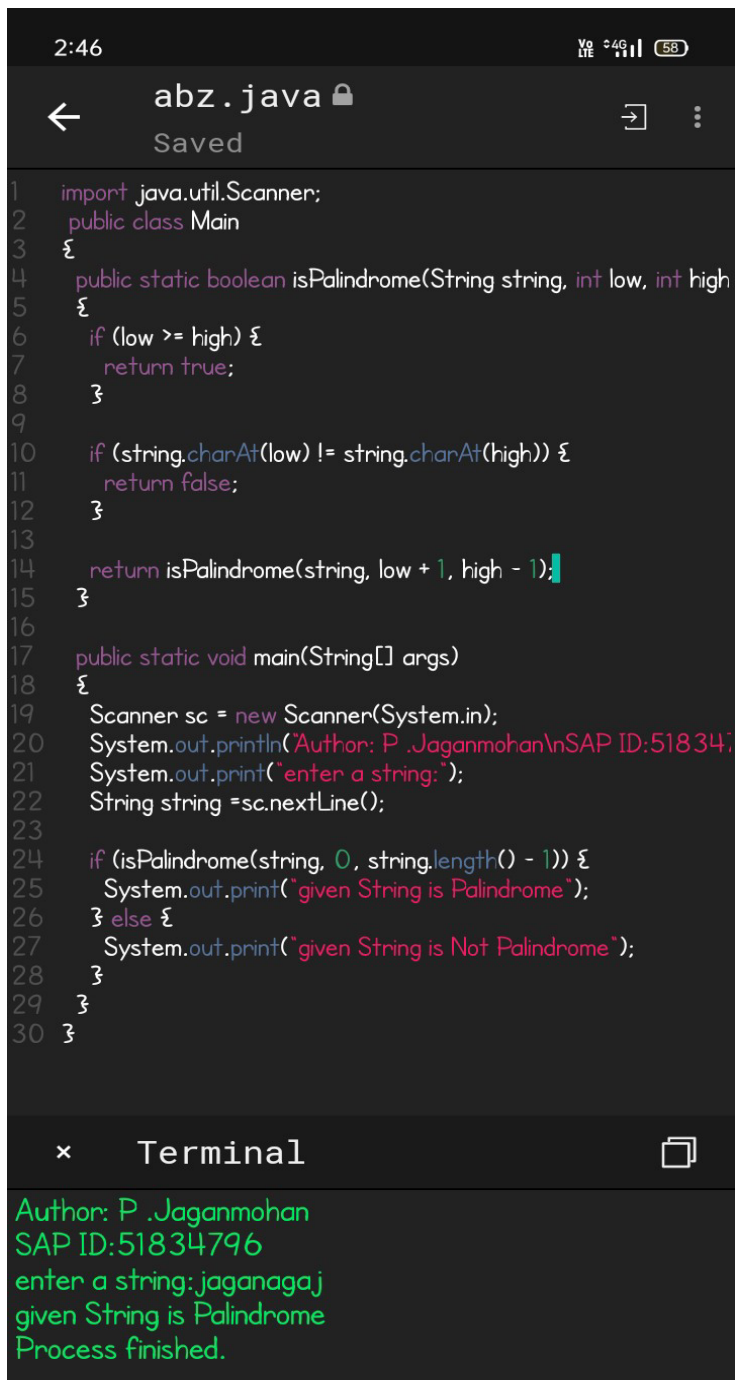
Enter operand 3(if you want. else enter 0): 76

$45.0 + 54.0 + 76.0 = 175.0$

Process finished.



2.



The screenshot shows a mobile application interface for editing a Java file named 'abz.java'. The top status bar displays the time '2:46', signal strength, and battery level at '58%'. The editor window has a title bar with a back arrow, the filename 'abz.java' with a lock icon, and icons for sharing and a menu. Below the title bar, the text 'Saved' is visible. The code editor contains a Java program with 30 lines of code, including imports, class declarations, and logic for checking if a string is a palindrome. The code is syntax-highlighted. At the bottom, there is a 'Terminal' tab with a close button and a window icon. The terminal output shows the program's execution, including author information, a prompt for a string, and the result 'given String is Palindrome'.

```
1  import java.util.Scanner;
2  public class Main
3  {
4  public static boolean isPalindrome(String string, int low, int high
5  {
6      if (low >= high) {
7          return true;
8      }
9
10     if (string.charAt(low) != string.charAt(high)) {
11         return false;
12     }
13
14     return isPalindrome(string, low + 1, high - 1);
15 }
16
17 public static void main(String[] args)
18 {
19     Scanner sc = new Scanner(System.in);
20     System.out.println("Author: P .Jaganmohan\nSAP ID:51834796");
21     System.out.print("enter a string:");
22     String string =sc.nextLine();
23
24     if (isPalindrome(string, 0, string.length() - 1)) {
25         System.out.print("given String is Palindrome");
26     } else {
27         System.out.print("given String is Not Palindrome");
28     }
29 }
30 }
```

× Terminal

Author: P .Jaganmohan
SAP ID:51834796
enter a string:jaganagaj
given String is Palindrome
Process finished.

3.



The screenshot shows a mobile application interface for editing a Java file named 'oddcoun_3.java'. The code is as follows:

```
1  import java.util.*;
2  public class OddCount
3  {
4      public static void main (String[] args)
5      {
6          System.out.println("Author : Jaganmohan");
7          System.out.println("SAP : 51834796");
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 n number are ; "+count);
23     }
24 }
25
26 }
```

Below the code editor is a terminal window titled 'Terminal' which displays the execution output:

```
Author : Jaganmohan
SAP : 51834796
enter a number :
1234567
no of odd digits in n number are ; 4
```

5.

The screenshot shows the Android Studio IDE. At the top, the status bar displays the time 2:53, 'No LTE' signal, 4G connectivity, and a 57% battery level. The title bar of the editor window shows 'abz.java' with a lock icon and a 'Saved' status. The editor contains the following Java code:

```
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 = { 5, 1, 7, 9, 8, 0, 2 };
27
28         bubbleSort(arr, arr.length);
29
30         System.out.println("Author:RJaganmohan\n SAP ID:51834796");
31         System.out.println(Arrays.toString(arr));
32     }
33 }
```

Below the editor is the 'Terminal' tab, which shows the output of the program:

```
Author:RJaganmohan
SAP ID:51834796
[0, 1, 2, 5, 7, 8, 9]

Process finished.
```