

B. Dakshayani_july_22

1st question answer

```
CalculatorException.java
Saved

2 import java.util.Scanner;
3 import java.util.InputMismatchException;
4 class CalculatorException
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    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    public void product(float a, float b)
26    {
27        System.out.println(a+"*"+b+"="+a*b);
28    }
29
30    public void division(float a, float b)
31    {
32        System.out.println(a+"/"+b+"="+a/b);
33    }
34 }
35
36 public class Main
37 {
38     public static void main (String[] args) {
39         CalculatorException cal=new CalculatorException();
40         Scanner sc=new Scanner(System.in);
41         System.out.println("Host name:Dakshayani\n");
42         try
43         {
44             System.out.println("1. ADD\n2. SUBTRACT\n3. PRODUCT\n4. DIVISION\n5. EXIT");
45             int op=sc.nextInt();
46             switch(op)
47             {
48                 case 1: cal.add(a,b,c);
49                 case 2: cal.subtract(a,b,c);
50                 case 3: cal.product(a,b);
51                 case 4: cal.division(a,b);
52                 case 5: System.exit(0);
53             }
54         }
55         catch (InputMismatchException e)
56         {
57             System.out.println("Invalid input");
58         }
59     }
60 }
```



```

CalculatorException.java
Saved

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 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): ");
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): ");
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();

```



```

CalculatorException.java
Saved

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("
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
111 }
112 catch(ArithmeticException ae)
113 {
114     System.out.println(ae.getMessage());
115 }
116

```

```

CalculatorException.java
Saved

× Terminal

Host name:Dakshayani
SAP ID:51834500
1. ADD
2. SUBTRACT
3. MULTIPLICATION
4. DIVISION
5. EXIT
Enter your choice:
4
Enter operand 1: 3
Enter operand 2: 0
Number cannot be divided by zero!!

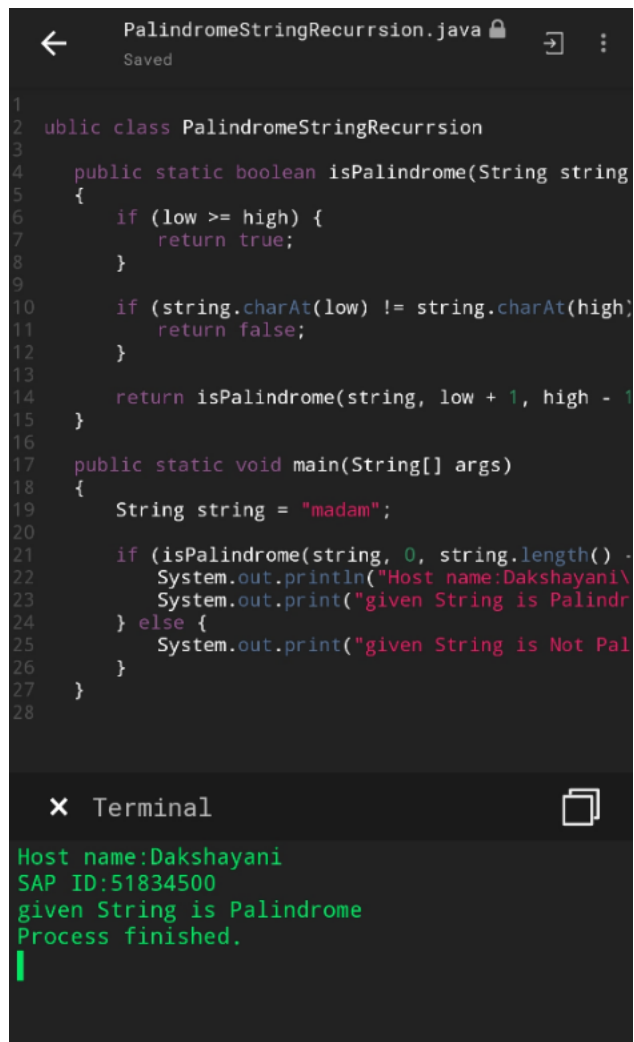
Process finished.

```

2nd question and answer



Edit with WPS Office



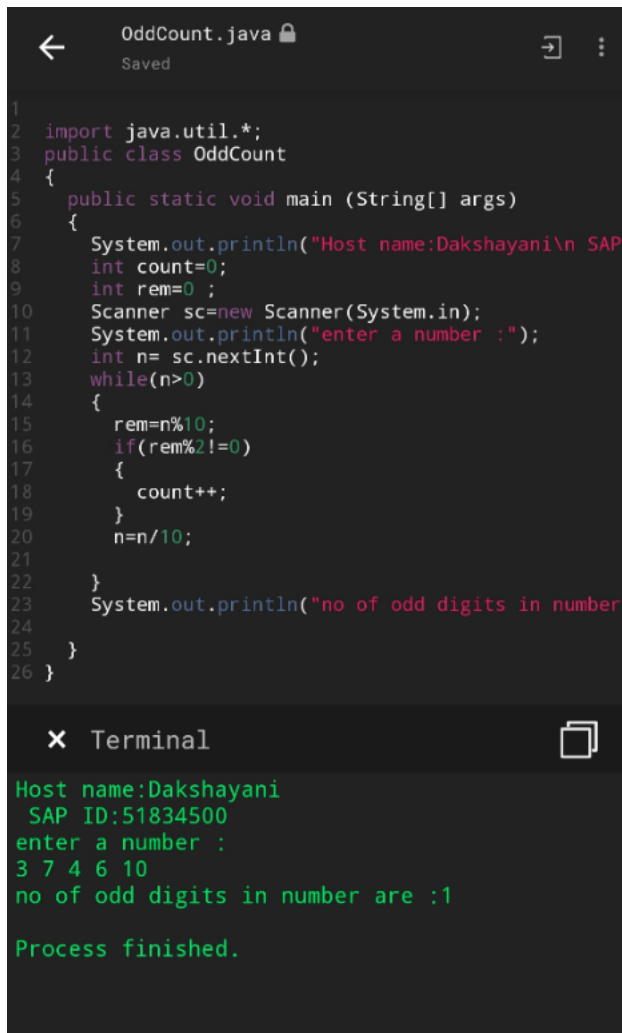
The screenshot displays a code editor window titled "PalindromeStringRecurrsion.java" with a "Saved" status. The code is a Java program that checks if a string is a palindrome using recursion. It defines a class `PalindromeStringRecurrsion` with a static method `isPalindrome` and a `main` method. The `isPalindrome` method uses a recursive approach, comparing characters from both ends of the string and moving inward. The `main` method initializes a string `"madam"` and calls `isPalindrome`. The output of the program is shown in a terminal window below the code editor.

```
1
2 public class PalindromeStringRecurrsion
3
4     public static boolean isPalindrome(String string
5     {
6         if (low >= high) {
7             return true;
8         }
9
10        if (string.charAt(low) != string.charAt(high)
11        {
12            return false;
13        }
14        return isPalindrome(string, low + 1, high - 1
15    }
16
17    public static void main(String[] args)
18    {
19        String string = "madam";
20
21        if (isPalindrome(string, 0, string.length() -
22            System.out.println("Host name:Dakshayani\
23            System.out.print("given String is Palindr
24        } else {
25            System.out.print("given String is Not Pal
26        }
27    }
28
```

Terminal

```
Host name:Dakshayani
SAP ID:51834500
given String is Palindrome
Process finished.
```

3rd question and answer



The image shows a screenshot of an IDE window titled "OddCount.java". The code is a Java program that counts the number of odd digits in a given number. The code is as follows:

```
1
2 import java.util.*;
3 public class OddCount
4 {
5     public static void main (String[] args)
6     {
7         System.out.println("Host name:Dakshayani\n SAP
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 }
```

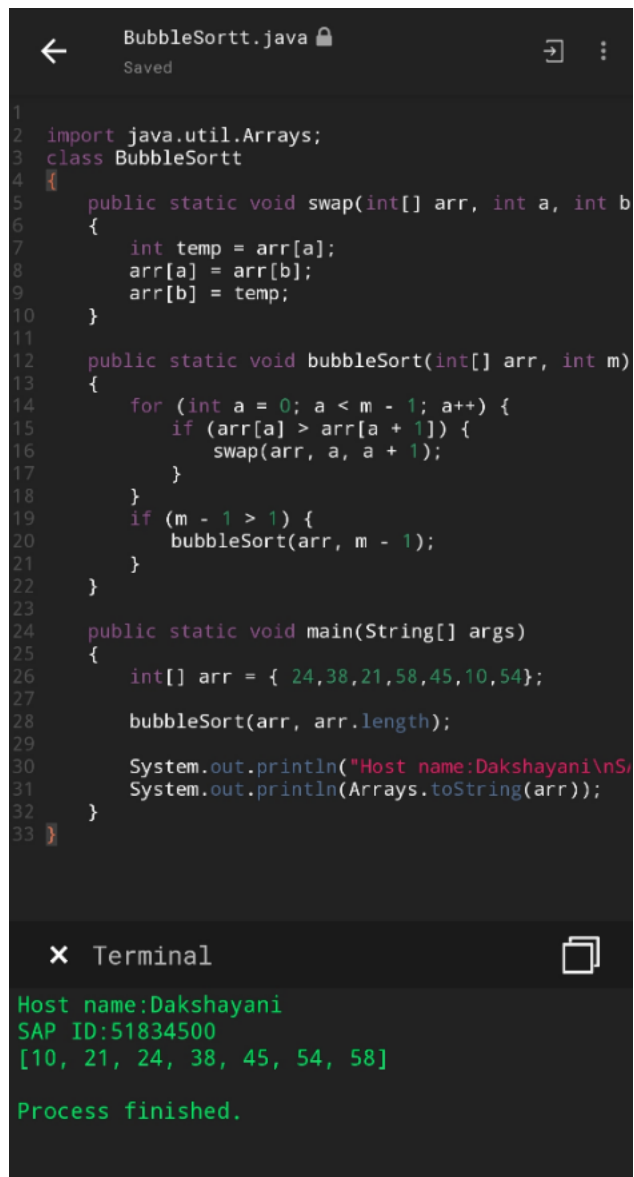
Below the code editor is a terminal window titled "Terminal". It shows the output of the program:

```
Host name:Dakshayani
SAP ID:51834500
enter a number :
3 7 4 6 10
no of odd digits in number are :1

Process finished.
```

5th question and answer





The image shows a screenshot of a Java IDE with a dark theme. The top bar indicates the file is 'BubbleSortt.java' and it has been 'Saved'. The code editor displays a Java program for Bubble Sort. The program includes a 'swap' method to exchange elements in an array and a 'bubbleSort' method that repeatedly passes through the array, swapping adjacent elements if they are in the wrong order. The 'main' method initializes an array with the values {24, 38, 21, 58, 45, 10, 54}, calls the 'bubbleSort' method, and prints the host name and the sorted array. The terminal window at the bottom shows the output: 'Host name:Dakshayani', 'SAP ID:51834500', and the sorted array '[10, 21, 24, 38, 45, 54, 58]', followed by 'Process finished.'.

```
1
2 import java.util.Arrays;
3 class BubbleSortt
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 = { 24,38,21,58,45,10,54};
27
28        bubbleSort(arr, arr.length);
29
30        System.out.println("Host name:Dakshayani\nSAP ID:51834500");
31        System.out.println(Arrays.toString(arr));
32    }
33 }
```

Terminal

```
Host name:Dakshayani
SAP ID:51834500
[10, 21, 24, 38, 45, 54, 58]

Process finished.
```

Quiz marks

Today I have BI so I didn't attempt the quiz