

Problem 1: Write a Java program to find the sum of all odd numbers in an array.

Code:

```
Program1.java x Program2.java x Program3.java x Program4.java x Program5.java x Pro
Source History
1 // 1. Write a Java program to find the sum of all odd numbers in an array.
2 //
3 package com.mycompany.programs;
4
5 import java.util.Scanner;
6
7 public class Program1 {
8
9     public static void main(String[] args) {
10         Scanner inp = new Scanner(System.in);
11
12         System.out.print("Enter the size of an array : ");
13         int size = inp.nextInt();
14
15         int[] array = new int[size];
16
17         for (int i = 0; i < array.length; i++) {
18             System.out.printf("Enter element - %d : ", (i + 1));
19             array[i] = inp.nextInt();
20         }
21
22         int sum = 0;
23
24         for (int i = 0; i < array.length; i++) {
25             if (array[i] % 2 != 0) {
26                 sum += array[i];
27             }
28         }
29
30         System.out.println("Sum of all odd numbers : " + sum);
31     }
32 }
33 }
```

Output:

```
--- exec:3.1.0:exec (default-cli) @ 01Fi
Enter the size of the array : 5
Enter element - 1 : 3
Enter element - 2 : 14
Enter element - 3 : 15
Enter element - 4 : 81
Enter element - 5 : 50
Element - 1 : 3
Element - 2 : 14
Element - 3 : 15
Element - 4 : 81
Element - 5 : 50
-----
BUILD SUCCESS
-----
Total time: 15.373 s
Finished at: 2025-02-07T15:24:00+06:00
-----
```

Problem 2: Write a Java program that takes two arrays as input, calculate the index wise sum of these arrays, and store the result in a third array.

Code:

```
Program1.java x Program2.java x Program3.java x Program4.java x Program5.java x Progra
Source History
1  /*
2  2. Write a Java program that takes two arrays as input, calculate the
3  index wise sum of these arrays, and store the result in a third array.
4  */
5  package com.mycompany.programs;
6
7  import java.util.Scanner;
8
9  public class Program2 {
10
11  public static void main(String[] args) {
12      Scanner inp = new Scanner(System.in);
13
14      System.out.print("Enter the size of both Arrays : ");
15      int size = inp.nextInt();
16
17      int[] array1 = new int[size];
18
19      System.out.println("Array1 elements input : ");
20      for (int i = 0; i < array1.length; i++) {
21          System.out.printf("Enter element - %d : ", (i + 1));
22          array1[i] = inp.nextInt();
23      }
24
25      int[] array2 = new int[size];
26
27      System.out.println("Array2 elements input : ");
28      for (int i = 0; i < array2.length; i++) {
29          System.out.printf("Enter element - %d : ", (i + 1));
30          array2[i] = inp.nextInt();
31      }
32
33      int[] array3 = new int[size];
34
35      for (int i = 0; i < size; i++) {
36          array3[i] = array1[i] + array2[i];
37      }
38
39      System.out.println("Index wise summed Array : ");
40      for (int i = 0; i < size; i++) {
41          System.out.printf("format: \"%d \", array3[i]);
42      }
43  }
44  }
45  }
```

Output:

```
Output - Run (Program2) x
--- exec.5.1.0.exec (default-ctrl)
Enter the size of both Arrays : 7
Array1 elements input :
Enter element - 1 : 1
Enter element - 2 : 2
Enter element - 3 : 3
Enter element - 4 : 4
Enter element - 5 : 5
Enter element - 6 : 6
Enter element - 7 : 7

Array2 elements input :
Enter element - 1 : 8
Enter element - 2 : 9
Enter element - 3 : 10
Enter element - 4 : 11
Enter element - 5 : 12
Enter element - 6 : 13
Enter element - 7 : 14
Index wise summed Array :
9 11 13 15 17 19 21
-----
BUILD SUCCESS
```

Problem 3: Write a Java program to search an element in an array.

Code:

```
Program1.java x Program2.java x Program3.java x Program4.java x Program5.java x Prog
Source History
1  /*
2  3. Write a Java program to search an element in an array.
3  */
4  package com.mycompany.programs;
5
6  import java.util.Scanner;
7
8  public class Program3 {
9
10     public static void main(String[] args) {
11         Scanner inp = new Scanner(System.in);
12
13         System.out.print("Enter the size of an array : ");
14         int size = inp.nextInt();
15
16         int[] array = new int[size];
17
18         for (int i = 0; i < array.length; i++) {
19             System.out.printf("Enter element - %d : ", (i + 1));
20             array[i] = inp.nextInt();
21         }
22
23         System.out.println("Enter element you want to search : ");
24         int search = inp.nextInt();
25
26         boolean result = false;
27
28         for (int i = 0; i < array.length; i++) {
29             if (array[i] == search) {
30                 System.out.printf("Element found at index %d", args: i);
31                 result = true;
32                 break;
33             }
34         }
35
36         if (!result) {
37             System.out.println("Error! element not found");
38         }
39     }
40 }
41
```

Output:

```
Output - Run (Program3) x
--- exec:3.1.0:exec (default-cli) @
Enter the size of an array : 5
Enter element - 1 : 65
Enter element - 2 : 47
Enter element - 3 : 91
Enter element - 4 : 35
Enter element - 5 : 88
Enter element you want to search :
91
Element found at index 2
-----
```

```
Output - Run (Program3) x
--- exec:3.1.0:exec (default-cli) @ L
Enter the size of an array : 5
Enter element - 1 : 94
Enter element - 2 : 65
Enter element - 3 : 74
Enter element - 4 : 33
Enter element - 5 : 28
Enter element you want to search :
30
Error! element not found
-----
```

Problem 4: Write a Java program to reverse the elements in an array without using a second array.

Code:

```
Program1.java x Program2.java x Program3.java x Program4.java x Program5.java x
Source History
1  /*
2  4. Write a Java program to reverse the elements
3  in an array without using a second array.
4  */
5  package com.mycompany.programs;
6
7  import java.util.Scanner;
8
9  public class Program4 {
10
11     public static void main(String[] args) {
12         Scanner inp = new Scanner(System.in);
13
14         System.out.print(s: "Enter the size of an array : ");
15         int size = inp.nextInt();
16
17         int[] array = new int[size];
18
19         for (int i = 0; i < array.length; i++) {
20             System.out.printf(format: "Enter element - %d : ", (i + 1));
21             array[i] = inp.nextInt();
22         }
23
24         System.out.print(s: "Array elements : ");
25         for (int i = 0; i < size; i++) {
26             System.out.printf(format: "%d ", array[i]);
27         }
28
29         int temp;
30
31         for (int i = 0; i < size / 2; i++) {
32             temp = array[i];
33             array[i] = array[size - 1 - i];
34             array[size - 1 - i] = temp;
35         }
36
37         System.out.println(x: "Reversed array : ");
38         for (int i = 0; i < size; i++) {
39             System.out.printf(format: "%d ", array[i]);
40         }
41     }
42 }
43
```

Output:

```
Output - Run (Program4) x
--release 22 is recommended instead of
--- exec:3.1.0:exec (default-cli) @ LabAss
Enter the size of an array : 6
Enter element - 1 : 14
Enter element - 2 : 18
Enter element - 3 : 78
Enter element - 4 : 93
Enter element - 5 : 51
Enter element - 6 : 62
Array elements : 14 18 78 93 51 62
Reversed array :
62 51 93 78 18 14
-----
BUILD SUCCESS
```

Problem 5: Write a Java program to find the second highest element of an array.

Code:

```
1  /*
2  5. Write a Java program to find the second highest element of an array.
3  */
4  package com.mycompany.programs;
5
6  import java.util.Scanner;
7
8  public class Program5 {
9
10     public static void main(String[] args) {
11         Scanner inp = new Scanner(System.in);
12
13         System.out.println(1 != 15);
14
15         System.out.print("Enter the size of an array : ");
16         int size = inp.nextInt();
17
18         int[] array = new int[size];
19
20         for (int i = 0; i < array.length; i++) {
21             System.out.printf("Enter element - %d : ", (i + 1));
22             array[i] = inp.nextInt();
23         }
24
25         System.out.print("Array elements : ");
26         for (int i = 0; i < size; i++) {
27             System.out.printf("%d ", array[i]);
28         }
29
30         int max = array[0];
31         int secondMax = array[0];
32
33         for (int i = 0; i < array.length; i++) {
34             if (array[i] > max) {
35                 secondMax = max;
36                 max = array[i];
37             } else if (array[i] > secondMax && array[i] != max) {
38                 secondMax = array[i];
39             }
40         }
41
42         System.out.println("\nSecond highest element: " + secondMax);
43
44         inp.close();
45     }
46 }
47
```

Output:

```
Output - Run (Program4) x
--release 22 is recommended instead of
--- exec:3.1.0:exec (default-cli) @ LabAss
Enter the size of an array : 6
Enter element - 1 : 14
Enter element - 2 : 18
Enter element - 3 : 78
Enter element - 4 : 93
Enter element - 5 : 51
Enter element - 6 : 62
Array elements : 14 18 78 93 51 62
Reversed array :
62 51 93 78 18 14
-----
BUILD SUCCESS
```

Problem 6: Write a Java program that calculates the average of an array, excluding the highest and lowest values in the array.

Code:

```
Program5.java x Program6.java x Program7.java x
Source History
1  /*
2   6. Write a Java program that calculates the average of an
3   array, excluding the highest and lowest values in the array.
4   */
5   package com.mycompany.programs;
6
7   import java.util.Scanner;
8
9   public class Program6 {
10
11   public static void main(String[] args) {
12       Scanner inp = new Scanner(System.in);
13
14       System.out.print("Enter the size of an array : ");
15       int size = inp.nextInt();
16
17       int[] array = new int[size];
18
19       for (int i = 0; i < array.length; i++) {
20           System.out.printf("Enter element - %d : ", (i + 1));
21           array[i] = inp.nextInt();
22       }
23
24       int max = array[0];
25       int min = array[0];
26       int sum = 0;
27
28       for (int i = 0; i < array.length; i++) {
29           if (array[i] > max) {
30               max = array[i];
31           }
32           if (array[i] < min) {
33               min = array[i];
34           }
35       }
36
37       for (int i = 0; i < array.length; i++) {
38           if (array[i] != max && array[i] != min) {
39               sum += array[i];
40           }
41       }
42
43       System.out.println("Sum of the array : " + sum);
44
45       double average = sum / (array.length - 2);
46       System.out.println("Average : " + average);
47   }
48 }
```

Output:

```
Output - Run (Program6) x
--- exec:3.1.0:exec (default-cli) @ L
Enter the size of an array : 6
Enter element - 1 : 10
Enter element - 2 : 20
Enter element - 3 : 30
Enter element - 4 : 40
Enter element - 5 : 50
Enter element - 6 : 60
Sum of the array : 140
Average : 35.0
-----
BUILD SUCCESS
-----
Total time: 27.600 s
```

Problem 7: Write a Java program to calculate the sum of all the prime numbers in a 2D array.

Code:

```
1  /*7. Write a Java program to calculate the
2  sum of all the prime numbers in a 2D array. */
3  package com.mycompany.programs;
4
5  import java.util.Scanner;
6
7  public class Program7 {
8
9      public static boolean isPrime(int n) {
10         if (n < 2) {
11             return false;
12         }
13
14         int i = 2;
15         while (i * i <= n) {
16             if (n % i == 0) {
17                 return false;
18             }
19             i++;
20         }
21         return true;
22     }
23
24     public static void main(String[] args) {
25         Scanner sc = new Scanner(System.in);
26
27         int row, column;
```

```
28
29         System.out.print("Enter row in array: ");
30         row = sc.nextInt();
31
32         System.out.print("Enter column in array: ");
33         column = sc.nextInt();
34
35         int[][] array = new int[row][column];
36
37         for (int i = 0; i < row; i++) {
38             System.out.printf("Input %d elements for row %d: ", row, i + 1);
39
40             for (int j = 0; j < column; j++) {
41                 array[i][j] = sc.nextInt();
42             }
43         }
44
45         int sum = 0;
46         for (int i = 0; i < row; i++) {
47             for (int j = 0; j < column; j++) {
48                 if (isPrime(array[i][j])) {
49                     sum += array[i][j];
50                 }
51             }
52         }
53         System.out.println("Sum of prime numbers: " + sum);
54     }
55 }
```

Output:

```
Output - Run (Program7) x
--release 22 is recommended inste
lly

--- exec:3.1.0:exec (default-cli) @ L
Enter row in array: 3
Enter column in array: 3
Input 3 elements for row 1: 3 2 1
Input 3 elements for row 2: 6 5 4
Input 3 elements for row 3: 9 8 7
Sum of prime numbers: 17

-----
BUILD SUCCESS
-----

Total time: 01:36 min
```