Rajalakshmi Engineering College

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2024_28_III_OOPS Using Java Lab

REC_2028_OOPS using Java_Week 3_MCQ

Attempt : 1
Total Mark : 15
Marks Obtained : 4

Section 1 : MCQ

1. What will be the output of the following code?

```
class Q {
   public static void main(String[] args) {
      int[][] arr = {
         {5, 6, 7},
         {8, 9, 10}
      };
      System.out.println(arr[0][2]);
   }
}
```

Answer

10

Status : Wrong ***Marks : 0/1***

2. What will be the output of the following code?

```
class M {
   public static void main(String[] args) {
      int[][] arr = {
         {1, 2},
         {3, 4},
         {5, 6}
      };

      for (int i = 0; i < arr.length; i++) {
         System.out.print(arr[i][0] + " ");
      }
   }
}
```

Answer

2 1 4

Status : Wrong ***Marks : 0/1***

3. What will be the output of the following code?

```
class Sample {
   public static void main(String[] args) {
      int[][] matrix = {
         {1, 2, 3},
         {4, 5, 6}
      };
      System.out.println(matrix[1][2]);
   }
}
```

Answer

2

Status : Wrong ***Marks : 0/1***

4. What will be the output of the following code?

```
class Sample {
   public static void main(String[] args) {
      int[] a = {1, 2, 3};
      int product = 1;
      for (int i = 0; i < a.length; i++) {
         product *= a[i];
      }
      System.out.println(product);
   }
}
```

Answer

3

Status : Wrong ***Marks : 0/1***

5. What will be the output of the following code?

```
class Q {
   public static void main(String[] args) {
      int[] a = {1, 2, 3, 4};
      for (int i = 0; i < a.length; i++) {
         if (a[i] % 2 == 0)
            a[i] = 0;
      }
      System.out.println(a[1] + " " + a[3]);
   }
}
```

Answer

2 4

Status : Wrong ***Marks : 0/1***

6. What will be the output of the following code?

```
class Q {
   public static void main(String[] args) {
```

```
        int[][] a = {
            {1, 2},
            {3, 4}
        };
        for (int i = 0; i < a.length; i++) {
            for (int j = 0; j < a[0].length; j++) {
                System.out.print(a[i][j] + " ");
            }
        }
    }
}
```

Answer

3 2 4

Status : Wrong ***Marks : 0/1***

7. What will be the output of the given code?

```
public class Main {
    public static void main(String[] args) {
        int[] arr = {1, 2, 3, 4, 5};
        int n = arr.length;
        int temp = arr[0];

        for (int i = 0; i < n - 1; i++) {
            arr[i] = arr[i + 1];
        }
        arr[n - 1] = temp;

        for (int num : arr) {
            System.out.print(num + " ");
        }
    }
}
```

Answer

2 3 4 5 1

Status : Correct ***Marks : 1/1***

8. What will be the output of the following code?

```
class Sample {
    public static void main(String[] args) {
        int[][] data = {
            {1, 2},
            {3, 4}
        };
        int sum = 0;

        for (int[] row : data) {
            for (int val : row) {
                sum += val;
            }
        }

        System.out.println("Sum = " + sum);
    }
}
```

Answer

Sum = 4

Status : Wrong ***Marks : 0/1***

9. What will be the output of the following code?

```
class Q {
    public static void main(String[] args) {
        int[] a = {1, 2, 3, 4};
        for (int i = 0; i < a.length / 2; i++) {
            int temp = a[i];
            a[i] = a[a.length - 1 - i];
            a[a.length - 1 - i] = temp;
        }
        System.out.println(a[0]);
    }
}
```

Answer

3

Status : Wrong ***Marks : 0/1***

10. What will be the output of the following code?

```
class Q {
   public static void main(String[] args) {
      int[] a = {1, 2, 1, 3, 1, 4};
      int count = 0;
      for (int i = 0; i < a.length; i++) {
         if (a[i] == 1) count++;
      }
      System.out.println(count);
   }
}
```

Answer

3

Status : Correct ***Marks : 1/1***

11. What will be the output of the following code?

```
class Q {
   public static void main(String[] args) {
      int[] nums = {3, 6, 7, 2, 8};
      int sum = 0;
      for (int i = 0; i < nums.length; i++) {
         if (nums[i] % 2 == 0)
            sum += nums[i];
      }
      System.out.println(sum);
   }
}
```

Answer

16

Status : Correct *Marks : 1/1*

12. What will be the output of the following code?

```
public class Test {
   public static void main(String[] args) {
      int[] x = {4, 8, 12};
      int result = x[0] * x[2];
      System.out.println(result);
   }
}
```

Answer

12

Status : Wrong *Marks : 0/1*

13. What will be the output of the following code?

```
class Q {
   public static void main(String[] args) {
      int[][] a = {
         {1, 2},
         {3, 4}
      };
      int sum = 0;
      for (int i = 0; i < a.length; i++)
         for (int j = 0; j < a[0].length; j++)
            sum += a[i][j];
      System.out.println(sum);
   }
}
```

Answer

44

Status : Wrong *Marks : 0/1*

14. What will be the output of the following code?

```
class Q {
   public static void main(String[] args) {
      int[] nums = {4, 2, 9, 5};
      int max = nums[0];
      for (int i = 1; i < nums.length; i++) {
         if (nums[i] > max)
            max = nums[i];
      }
      System.out.println(max);
   }
}
```

Answer

4

Status : Wrong ***Marks : 0/1***

15. What will be the output of the following code?

```
class ReverseArray {
   public static void main(String[] args) {
      int[] a = {1, 2, 3, 4};
      for (int i = 0; i < a.length / 2; i++) {
         int temp = a[i];
         a[i] = a[a.length - 1 - i];
         a[a.length - 1 - i] = temp;
      }
      for (int i : a)
         System.out.print(i + " ");
   }
}
```

Answer

4 3 2 1

Status : Correct ***Marks : 1/1***

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 3_Q1

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Rosh is intrigued by numerical patterns. Today, she stumbled upon a puzzle while working with arrays. She wants to compute the sum of the third-largest and second-smallest elements from a list of integers. She seeks your help to implement a program that solves this for her efficiently.

Input Format

The first line of input is an integer N, representing the size of the array.

The second line of input consists of N space-separated integers, representing the elements of the array.

Output Format

The output displays a single integer representing the sum of the third-largest and second-smallest elements in the array.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: 10
10 20 30 40 50 60 70 80 90 100
Output: 100

Answer

```
import java.util.*;

class SumThirdLargestSecondSmallest {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        int N = sc.nextInt();
        int[] arr = new int[N];


        for (int i = 0; i < N; i++) {
            arr[i] = sc.nextInt();
        }


        Arrays.sort(arr);


        int secondSmallest = arr[1];


        int thirdLargest = arr[N - 3];


        int result = secondSmallest + thirdLargest;


        System.out.println(result);

        sc.close();
```

```
    }
}
```

Status : Correct *Marks : 10/10*

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 3_Q3

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

You are developing a warehouse management system for a shipping company. The system uses an integer array to represent the weights of packages in a specific order. To verify that the weight capacity is not exceeded, the program needs to calculate the sum of the weights of the first and last packages in the list.

Task:

Write a code to calculate the sum of the weights of the first and last packages in the list. The program should take an integer array as input and return the total weight of the first and last packages.

Input Format

The first line of the input is an integer N representing the size of the array.

The second line of the input is N space-separated integer values.

Output Format

The output is displayed in the following format:

"Sum of the first and last elements: <<Sum>>"

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 5
10 20 30 40 50
Output: Sum of the first and last elements: 60

Answer

```
import java.util.Scanner;

public class Main {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);


      int N = scanner.nextInt();


      int[] weights = new int[N];


      for (int i = 0; i < N; i++) {
         weights[i] = scanner.nextInt();
      }


      int sum = weights[0] + weights[N - 1];


      System.out.println("Sum of the first and last elements: " + sum);
```

```
        scanner.close();
    }
}
```

Status : Correct ***Marks : 10/10***

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 3_Q3

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

You are developing a warehouse management system for a shipping company. The system uses an integer array to represent the weights of packages in a specific order. To verify that the weight capacity is not exceeded, the program needs to calculate the sum of the weights of the first and last packages in the list.

Task:

Write a code to calculate the sum of the weights of the first and last packages in the list. The program should take an integer array as input and return the total weight of the first and last packages.

Input Format

The first line of the input is an integer N representing the size of the array.

The second line of the input is N space-separated integer values.

Output Format

The output is displayed in the following format:

"Sum of the first and last elements: <<Sum>>"

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 5
10 20 30 40 50
Output: Sum of the first and last elements: 60

Answer

```
import java.util.Scanner;

public class Main {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);


      int N = scanner.nextInt();


      int[] weights = new int[N];


      for (int i = 0; i < N; i++) {
         weights[i] = scanner.nextInt();
      }


      int sum = weights[0] + weights[N - 1];


      System.out.println("Sum of the first and last elements: " + sum);
```

```
        scanner.close();
    }
}
```

Status : Correct *Marks : 10/10*

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2024_28_III_OOPS Using Java Lab

2028_REC_OOPS using Java_Week 3_Q5

Attempt : 1
Total Mark : 10
Marks Obtained : 10

Section 1 : Coding

1. Problem Statement

Sharon is creating a program that finds the first repeated element in an integer array. The program should efficiently identify the first element that appears more than once in the given array. If no such element is found, it should appropriately display a message.

Help Sharon to complete the program.

Input Format

The first line of input consists of an integer n, representing the number of elements in the array.

The second line consists of n space-separated integers, representing the array elements.

Output Format

If a repeated element is found, print the first element that appears more than once.

If no repeated element is found, print "No repeated element found in the array".

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 8
12 21 13 14 21 36 47 21
Output: 21

Answer

```
import java.util.*;

public class Main {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);


      int n = sc.nextInt();
      int[] arr = new int[n];


      for (int i = 0; i < n; i++) {
         arr[i] = sc.nextInt();
      }


      Set<Integer> seen = new HashSet<>();
      int repeated = -1;

      for (int i = 0; i < n; i++) {
         if (seen.contains(arr[i])) {
            repeated = arr[i];
            break;
         } else {
```

```
                seen.add(arr[i]);
            }
        }

        if (repeated != -1) {
            System.out.println(repeated);
        } else {
            System.out.println("No repeated element found in the array");
        }

        sc.close();
    }
}
```

Status : Correct ***Marks : 10/10***