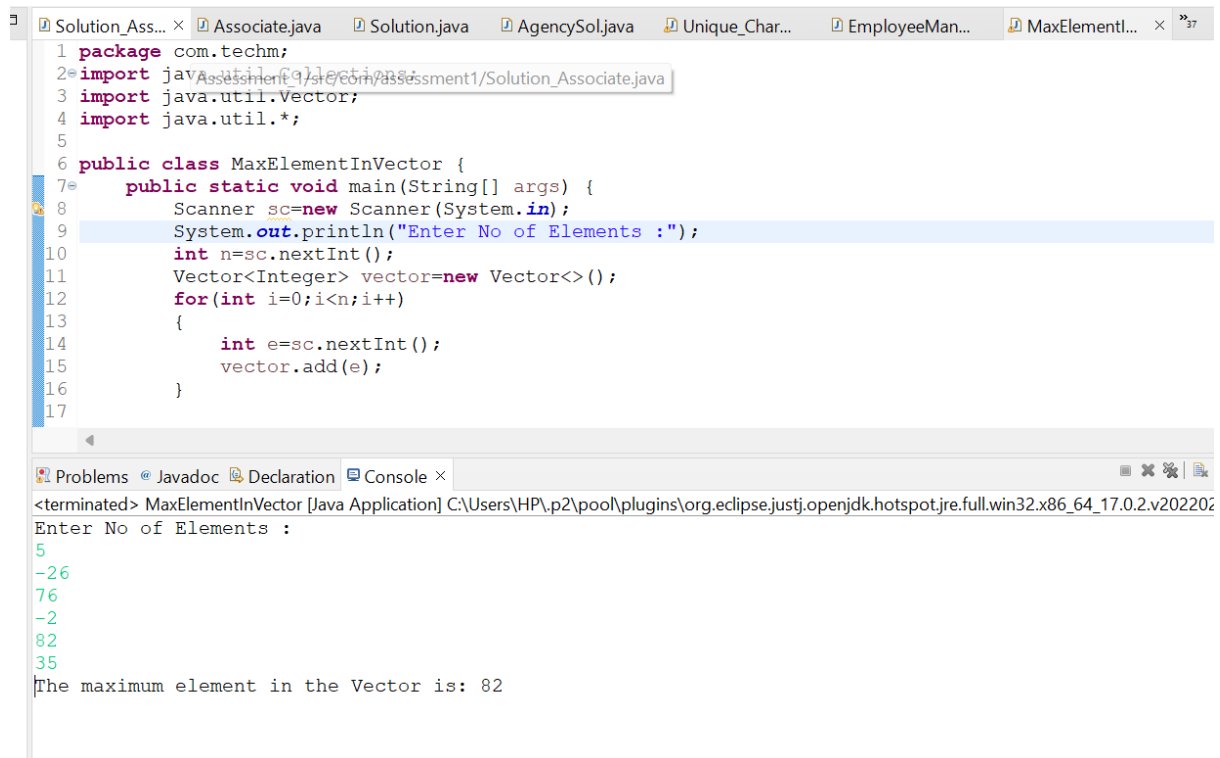


ASSESSMENT-3

1. Write a Java program to get the maximum element value from the Vector

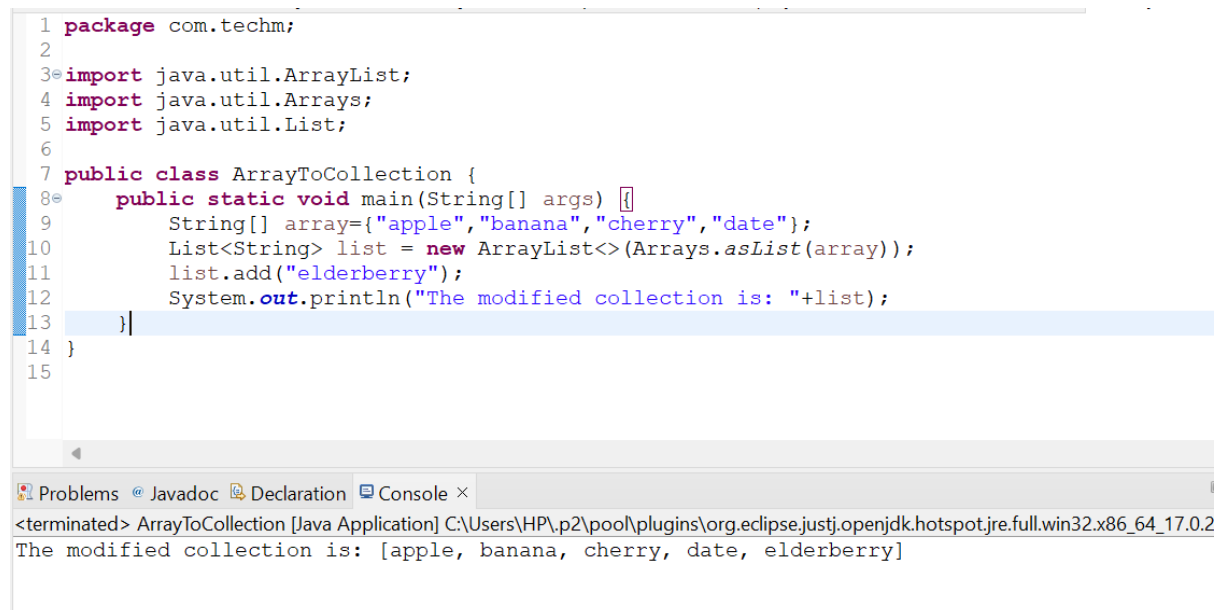


The screenshot shows an IDE with a Java file named `MaxElementInVector.java`. The code defines a `public class MaxElementInVector` with a `main` method. The `main` method uses a `Scanner` to take input for the number of elements, then creates a `Vector<Integer>` and adds `n` integers to it. Finally, it prints the maximum element using `vector.stream().max().get()`.

```
1 package com.techm;
2 import java.util.Collections;
3 import java.util.Vector;
4 import java.util.*;
5
6 public class MaxElementInVector {
7     public static void main(String[] args) {
8         Scanner sc=new Scanner(System.in);
9         System.out.println("Enter No of Elements :");
10        int n=sc.nextInt();
11        Vector<Integer> vector=new Vector<>();
12        for(int i=0;i<n;i++)
13        {
14            int e=sc.nextInt();
15            vector.add(e);
16        }
17        System.out.println("The maximum element in the Vector is: "+vector.stream().max().get());
18    }
19 }
```

The console output shows the program execution: it prompts for the number of elements (5), then takes five integers (-26, 76, -2, 82, 35) as input, and finally outputs "The maximum element in the Vector is: 82".

2. Write a Java Program to convert an array to Collection?



The screenshot shows an IDE with a Java file named `ArrayToCollection.java`. The code defines a `public class ArrayToCollection` with a `main` method. The `main` method creates an array of strings, converts it to a `List<String>` using `Arrays.asList()`, adds an element, and prints the resulting list.

```
1 package com.techm;
2
3 import java.util.ArrayList;
4 import java.util.Arrays;
5 import java.util.List;
6
7 public class ArrayToCollection {
8     public static void main(String[] args) {
9         String[] array={"apple","banana","cherry","date"};
10        List<String> list = new ArrayList<>(Arrays.asList(array));
11        list.add("elderberry");
12        System.out.println("The modified collection is: "+list);
13    }
14 }
15 }
```

The console output shows the program execution: it prints "The modified collection is: [apple, banana, cherry, date, elderberry]".

3. Write a Java Program to find the minimum and maximum elements in the List?

```
10      System.out.println("Please enter 5 integers:");
11      for (int i=0;i<5;i++) {
12          System.out.print("Enter integer "+(i + 1)+": ");
13          int number = scanner.nextInt();
14          l.add(number);
15      }
16
17
18      int min=Collections.min(l);
19      int max=Collections.max(l);
20
21
22      System.out.println("The minimum element in the list is: "+min);
23      System.out.println("The maximum element in the list is: "+max);
24  }
25  }
26
```

Problems @ Javadoc Declaration Console ×

<terminated> MinMaxInList [Java Application] C:\Users\HP\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_

Please enter 5 integers:
Enter integer 1: -37
Enter integer 2: 27
Enter integer 3: 0
Enter integer 4: 28
Enter integer 5: -17
The minimum element in the list is: -37
The maximum element in the list is: 28

4. Write a Java program to calculate the average of a list of integers using streams.

```
10      Scanner scanner=new Scanner(System.in);
11      List<Integer> l=new ArrayList<>();
12
13      // Take 5 integer inputs from the user
14      System.out.println("Please enter 5 integers:");
15
16      for (int i = 0; i < 5; i++) {
17          System.out.print("Enter integer "+(i + 1)+": ");
18          int number=scanner.nextInt();
19          l.add(number);
20      }
21      double avg=l.stream().collect(Collectors.averagingInt(Integer::intValue));
22
23      System.out.println("The average of the list is: "+avg);
24  }
25  }
26
```

Solution_Ass... × Unique_Char... EmployeeMan... MaxElementl... ArrayToColl... MinMaxInLis... AverageOfL

Problems @ Javadoc Declaration Console ×

<terminated> AverageOfList [Java Application] C:\Users\HP\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.2.v20

Please enter 5 integers:
Enter integer 1: 1
Enter integer 2: 2
Enter integer 3: 3
Enter integer 4: 4
Enter integer 5: 5
The average of the list is: 3.0

5. Write a Java program to calculate the sum of all even, odd numbers in a list using streams.

```
1 package com.techm;  
2  
3 import java.util.ArrayList;  
4 import java.util.List;  
5 import java.util.Scanner;  
6 import java.util.stream.Collectors;  
7  
8 public class SumEvenOddNumbers {  
9     public static void main(String[] args) {  
10         Scanner scanner=new Scanner(System.in);  
11         List<Integer> l=new ArrayList<>();  
12  
13         System.out.println("Please enter 5 integers:");  
14  
15         for (int i=0;i<5;i++) {  
16             System.out.print("Enter integer "+(i+1)+" : ");  
17             int number = scanner.nextInt();
```

6. Write a Java program to convert a list of strings to uppercase or lowercase using streams.

```

16         for (int i = 0; i < 5; i++) {
17             System.out.print("Enter string "+(i+1)+" : ");
18             String str = scanner.nextLine();
19             strings.add(str);
20         }
21
22
23         List<String> lowercaseStrings=strings.stream()
24                                     .map(String::toLowerCase)
25                                     .collect(Collectors.toList());
26
27
28         System.out.println("List of strings in lowercase: "+lowercaseStrings);
29
30     }
31 }
32

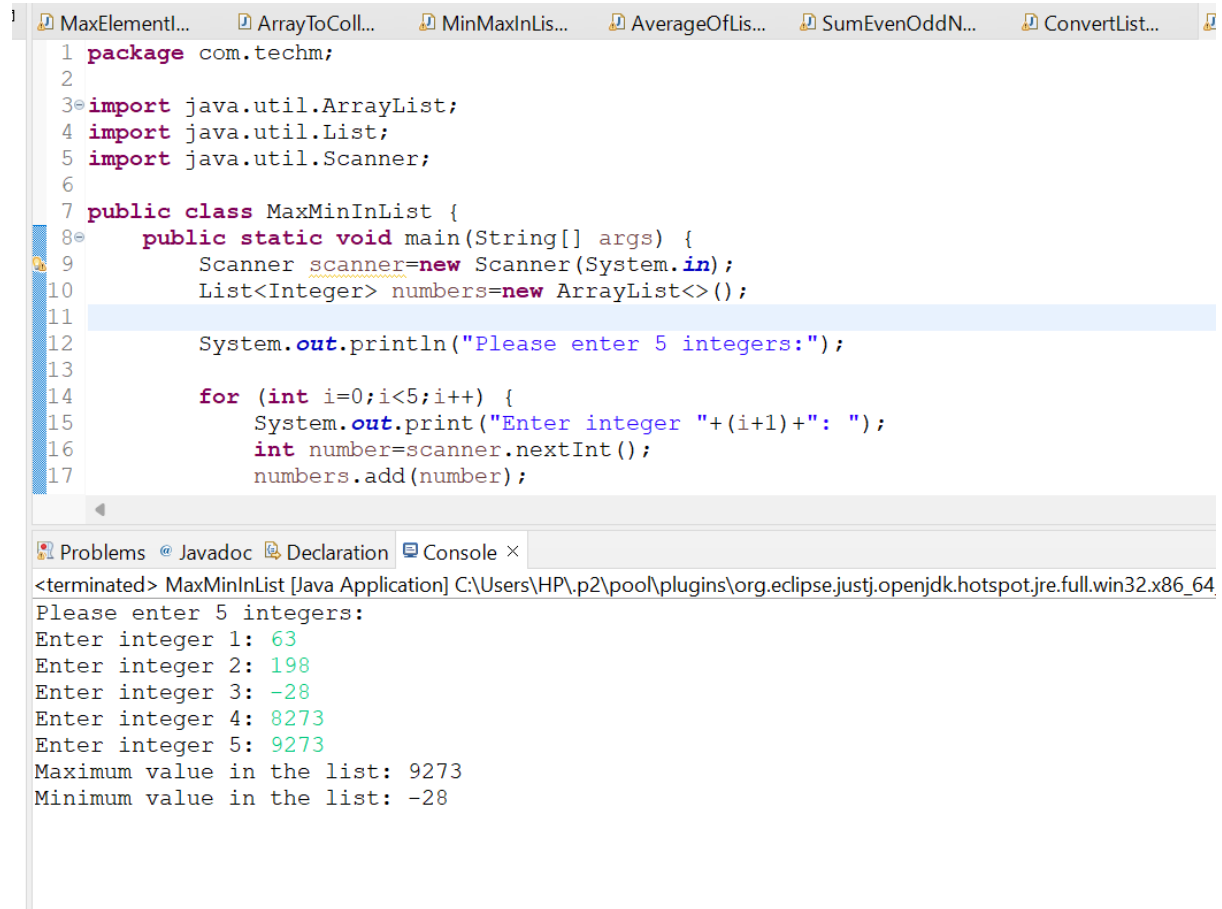
```

```

<terminated> ConvertListToLowercase [Java Application] C:\Users\HP\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86
Please enter 5 strings:
Enter string 1: MONIKa Janga
Enter string 2: RANI
Enter string 3: manavya
Enter string 4: SuShMa
Enter string 5: PavitrA
List of strings in lowercase: [monika janga, rani, manavya, sushma, pavitra]

```

7. Write a Java program to find the maximum and minimum values in a list of integers using streams.



The screenshot shows the Eclipse IDE with a Java project. The editor displays a file named `MaxMinInList.java` with the following code:

```
1 package com.techm;
2
3 import java.util.ArrayList;
4 import java.util.List;
5 import java.util.Scanner;
6
7 public class MaxMinInList {
8     public static void main(String[] args) {
9         Scanner scanner=new Scanner(System.in);
10        List<Integer> numbers=new ArrayList<>();
11
12        System.out.println("Please enter 5 integers:");
13
14        for (int i=0;i<5;i++) {
15            System.out.print("Enter integer "+(i+1)+" : ");
16            int number=scanner.nextInt();
17            numbers.add(number);
18        }
19    }
20 }
```

The console output shows the execution of the program:

```
<terminated> MaxMinInList [Java Application] C:\Users\HP\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64
Please enter 5 integers:
Enter integer 1: 63
Enter integer 2: 198
Enter integer 3: -28
Enter integer 4: 8273
Enter integer 5: 9273
Maximum value in the list: 9273
Minimum value in the list: -28
```