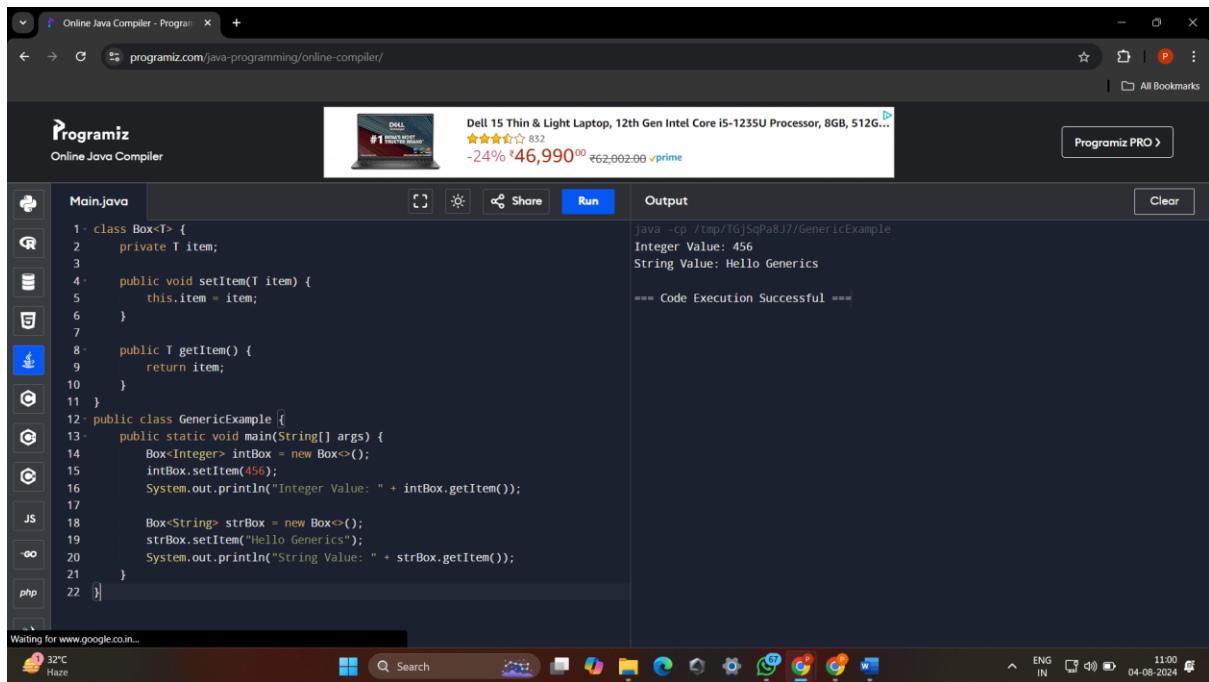


```
1. class Box<T> {  
    private T item;  
  
    public void setItem(T item) {  
        this.item = item;  
    }  
  
    public T getItem() {  
        return item;  
    }  
}  
  
public class GenericExample {  
    public static void main(String[] args) {  
        Box<Integer> intBox = new Box<>();  
        intBox.setItem(456);  
        System.out.println("Integer Value: " + intBox.getItem());  
  
        Box<String> strBox = new Box<>();  
        strBox.setItem("Hello Generics");  
        System.out.println("String Value: " + strBox.getItem());  
    }  
}
```



```

2. public class GenericMethodExample {

    public static <T> void swap(T[] array, int index1, int index2) {

        T temp = array[index1];

        array[index1] = array[index2];

        array[index2] = temp;

    }

    public static void main(String[] args) {

        Integer[] intArray = {1, 2, 3, 4};

        System.out.println("Before swapping (Integer):");

        for (Integer i : intArray) {

            System.out.print(i + " ");

        }

        System.out.println();

        swap(intArray, 1, 3);

        System.out.println("After swapping (Integer):");

        for (Integer i : intArray) {

            System.out.print(i + " ");

        }

    }

}

```

```

System.out.println();

String[] strArray = {"A", "B", "C", "D"};

System.out.println("Before swapping (String):");

for (String s : strArray) {

    System.out.print(s + " ");

}

System.out.println();

swap(strArray, 0, 2);

System.out.println("After swapping (String):");

for (String s : strArray) {

    System.out.print(s + " ");

}

System.out.println();

}

}

```

The screenshot shows a web browser window with the URL `programiz.com/java-programming/online-compiler/`. The page title is "Online Java Compiler - Programiz". The main content area displays a Java program in a dark-themed editor. The program defines a `GenericMethodExample` class with a `swap` method and a `main` method. The `main` method demonstrates swapping elements in an `Integer` array and a `String` array. The output window on the right shows the results of the execution, including the state of the arrays before and after the swap operation. The output is as follows:

```

Before swapping (Integer):
1 2 3 4
After swapping (Integer):
1 4 3 2
Before swapping (String):
A B C D
After swapping (String):
C B A D
=== Code Execution Successful ===

```

The bottom of the browser window shows the Windows taskbar with the date and time set to 11:02 on 04-08-2024.

```
3. import java.util.List;

public class SumEvenOdd {

    public static <T extends Number> void sumEvenOdd(List<T> numbers) {

        int sumEven = 0;

        int sumOdd = 0;


        for (T number : numbers) {
            if (number.intValue() % 2 == 0) {
                sumEven += number.intValue();
            } else {
                sumOdd += number.intValue();
            }
        }

        System.out.println("Sum of even numbers: " + sumEven);
        System.out.println("Sum of odd numbers: " + sumOdd);
    }

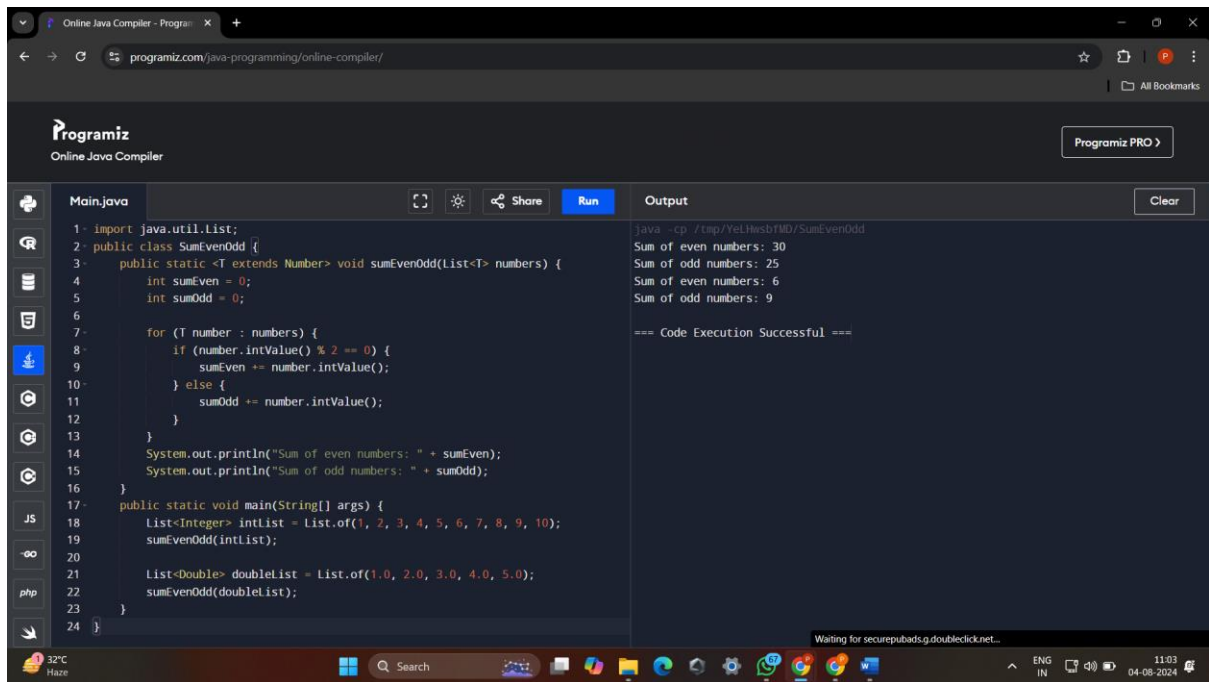
    public static void main(String[] args) {

        List<Integer> intList = List.of(1, 2, 3, 4, 5, 6, 7, 8, 9, 10);

        sumEvenOdd(intList);


        List<Double> doubleList = List.of(1.0, 2.0, 3.0, 4.0, 5.0);

        sumEvenOdd(doubleList);
    }
}
```



4. import java.util.List;

public class FindElement {

 public static <T> int findFirstOccurrence(List<T> list, T target) {

 for (int i = 0; i < list.size(); i++) {

 if (list.get(i).equals(target)) {

 return i;

 }

 }

 return -1;

}

public static void main(String[] args) {

 List<String> stringList = List.of("apple", "banana", "cherry", "date");

 System.out.println("Index of 'banana': " + findFirstOccurrence(stringList, "banana"));

 System.out.println("Index of 'fig': " + findFirstOccurrence(stringList, "fig"));

 List<Integer> intList = List.of(1, 2, 3, 4, 5);

```

        System.out.println("Index of 3: " + findFirstOccurrence(intList, 3));

        System.out.println("Index of 6: " + findFirstOccurrence(intList, 6));

    }

}

```

The screenshot displays the Programiz Online Java Compiler interface. The main editor contains the following Java code:

```

1- import java.util.List;
2- public class FindElement {
3-     public static <T> int findFirstOccurrence(List<T> list, T target) {
4-         for (int i = 0; i < list.size(); i++) {
5-             if (list.get(i).equals(target)) {
6-                 return i;
7-             }
8-         }
9-         return -1;
10-    }
11-    public static void main(String[] args) {
12-        List<String> stringList = List.of("apple", "banana", "cherry", "date");
13-        System.out.println("Index of 'banana': " + findFirstOccurrence(stringList, "banana"));
14-        System.out.println("Index of 'fig': " + findFirstOccurrence(stringList, "fig"));
15-
16-        List<Integer> intList = List.of(1, 2, 3, 4, 5);
17-        System.out.println("Index of 3: " + findFirstOccurrence(intList, 3));
18-        System.out.println("Index of 6: " + findFirstOccurrence(intList, 6));
19-    }
20- }

```

The output window on the right shows the following results:

```

java -cp /tmp/vZLytAGasA/FindElement
Index of 'banana': 1
Index of 'fig': -1
Index of 3: 2
Index of 6: -1

=== Code Execution Successful ===

```

The browser address bar shows the URL: programiz.com/java-programming/online-compiler/. The top navigation bar includes the Programiz logo and a "Programiz PRO" button. A banner for a Dell laptop is also visible.