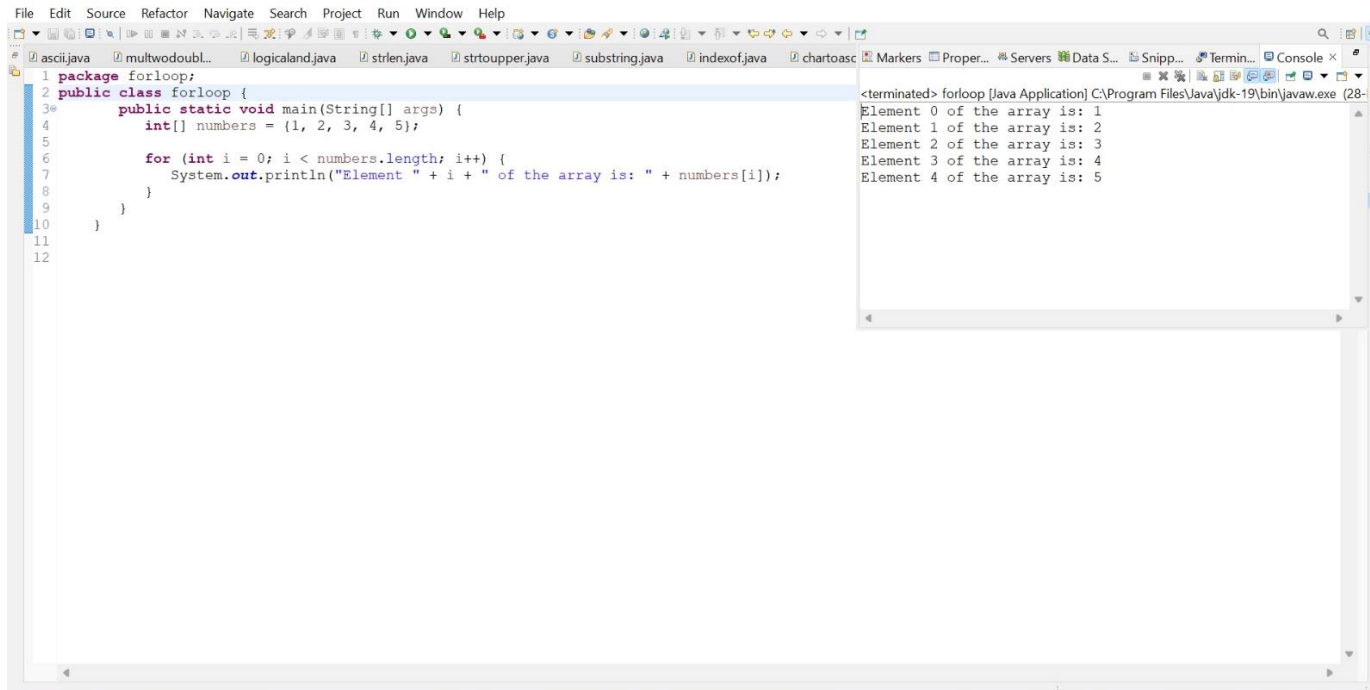


ASSIGNMENT- 04

1.Create an array of integers and use a for loop to print out each element of the array.

Codeshare link: <https://codeshare.io/km8qzO>

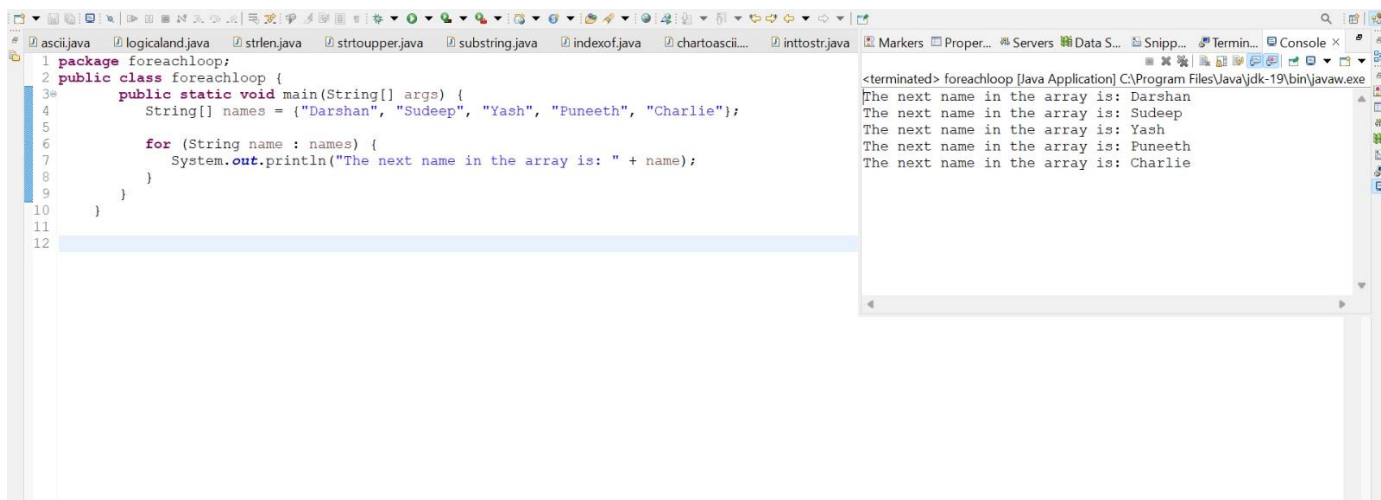


The screenshot shows an IDE with a Java file named `forloop.java`. The code defines a `forloop` package and a `forloop` class. Inside the `main` method, an integer array `numbers` is initialized with values `{1, 2, 3, 4, 5}`. A `for` loop iterates from `i = 0` to `i < numbers.length`, printing each element with the message "Element " + i + " of the array is: " + numbers[i]. The console output shows the following lines:

```
<terminated> forloop [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-
Element 0 of the array is: 1
Element 1 of the array is: 2
Element 2 of the array is: 3
Element 3 of the array is: 4
Element 4 of the array is: 5
```

2.Create an array of strings and use a for-each loop to print out each element of the array.

Codeshare link: <https://codeshare.io/9OLxQV>

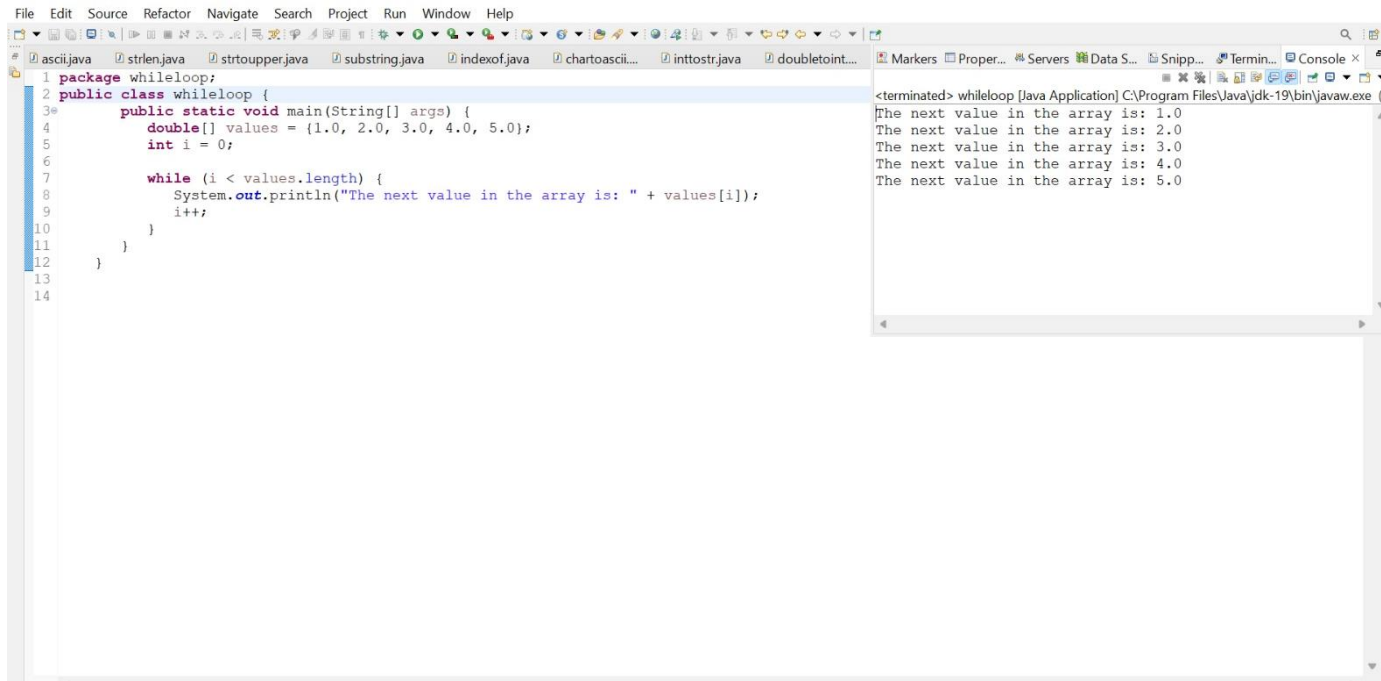


The screenshot shows an IDE with a Java file named `foreachloop.java`. The code defines a `foreachloop` package and a `foreachloop` class. Inside the `main` method, a string array `names` is initialized with values `{"Darshan", "Sudeep", "Yash", "Puneeth", "Charlie"}`. A `for` loop with a range variable `String name : names` iterates over the array, printing each element with the message "The next name in the array is: " + name. The console output shows the following lines:

```
<terminated> foreachloop [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe
The next name in the array is: Darshan
The next name in the array is: Sudeep
The next name in the array is: Yash
The next name in the array is: Puneeth
The next name in the array is: Charlie
```

3. Create an array of doubles and use a while loop to print out each element of the array.

Codeshare link : <https://codeshare.io/JbMJAK>



The screenshot shows an IDE with a Java file named `whileloop.java`. The code defines a `whileloop` class with a `main` method. It creates a `double` array `values` with the values `{1.0, 2.0, 3.0, 4.0, 5.0}` and an `int` variable `i` initialized to `0`. A `while` loop runs as long as `i < values.length`, printing the message "The next value in the array is: " followed by the value at `values[i]`, and then increments `i` by 1.

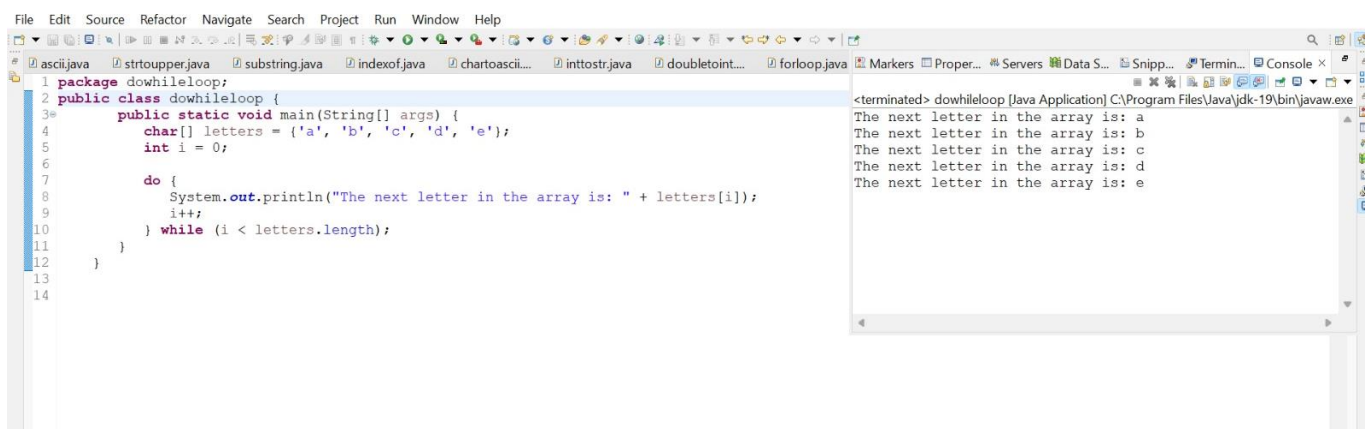
```
1 package whileloop;
2 public class whileloop {
3     public static void main(String[] args) {
4         double[] values = {1.0, 2.0, 3.0, 4.0, 5.0};
5         int i = 0;
6
7         while (i < values.length) {
8             System.out.println("The next value in the array is: " + values[i]);
9             i++;
10        }
11    }
12 }
13
14
```

The console output shows the program's execution, printing the values of the array one by one:

```
<terminated> whileloop [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe
The next value in the array is: 1.0
The next value in the array is: 2.0
The next value in the array is: 3.0
The next value in the array is: 4.0
The next value in the array is: 5.0
```

4. Create an array of characters and use a do-while loop to print out each element of the array.

Codeshare link: <https://codeshare.io/wnv8Dp>



The screenshot shows an IDE with a Java file named `dowhileloop.java`. The code defines a `dowhileloop` class with a `main` method. It creates a `char` array `letters` with the values `{ 'a', 'b', 'c', 'd', 'e' }` and an `int` variable `i` initialized to `0`. A `do-while` loop prints the message "The next letter in the array is: " followed by the value at `letters[i]`, increments `i` by 1, and continues as long as `i < letters.length`.

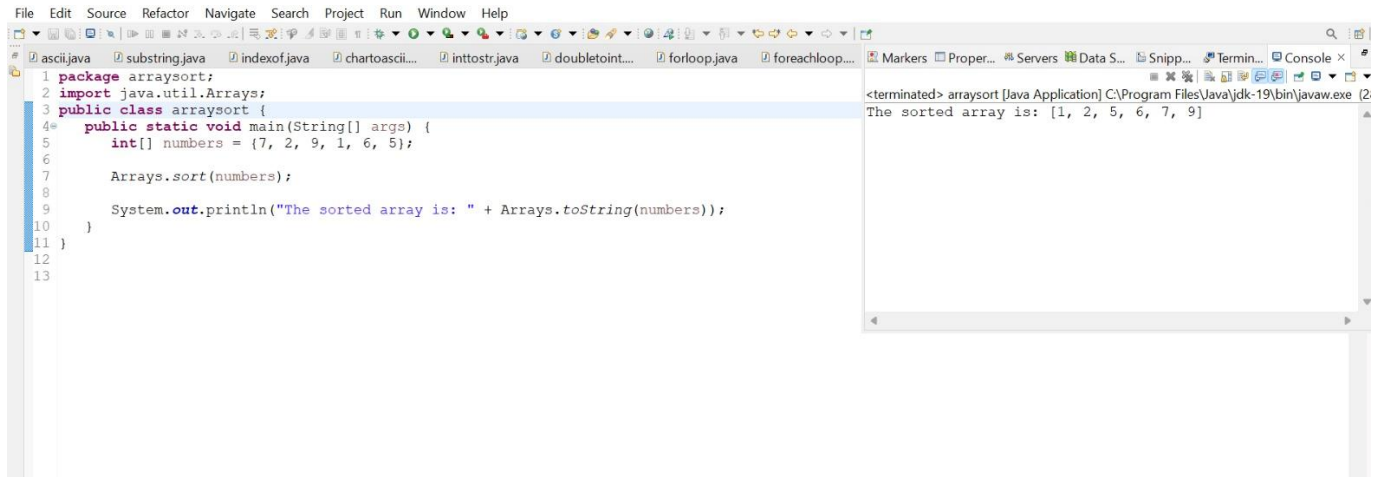
```
1 package dowhileloop;
2 public class dowhileloop {
3     public static void main(String[] args) {
4         char[] letters = {'a', 'b', 'c', 'd', 'e'};
5         int i = 0;
6
7         do {
8             System.out.println("The next letter in the array is: " + letters[i]);
9             i++;
10        } while (i < letters.length);
11    }
12 }
13
14
```

The console output shows the program's execution, printing the letters of the array one by one:

```
<terminated> dowhileloop [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe
The next letter in the array is: a
The next letter in the array is: b
The next letter in the array is: c
The next letter in the array is: d
The next letter in the array is: e
```

5. Create an array of integers and use the Arrays class method sort() to sort the array in ascending order.

Codeshare link: <https://codeshare.io/km8qNO>



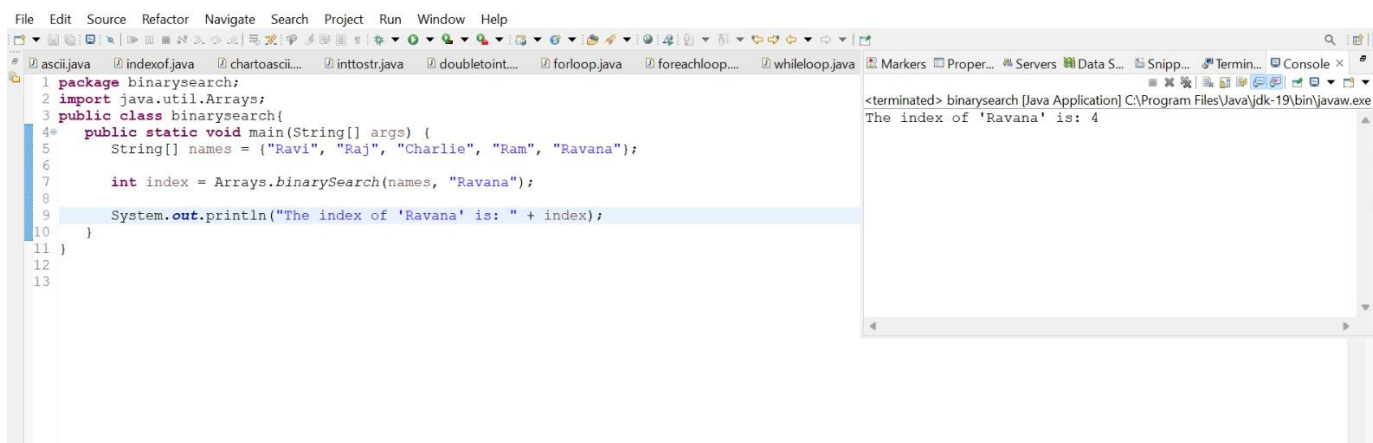
The screenshot shows an IDE with a Java file named 'arraysort.java'. The code defines a class 'arraysort' with a 'main' method. Inside 'main', an integer array 'numbers' is initialized with values {7, 2, 9, 1, 6, 5}. The 'Arrays.sort(numbers)' method is called to sort the array. Finally, 'System.out.println' is used to print the sorted array using 'Arrays.toString(numbers)'. The console output on the right shows the message: 'The sorted array is: [1, 2, 5, 6, 7, 9]'.

```
1 package arraysort;
2 import java.util.Arrays;
3 public class arraysort {
4     public static void main(String[] args) {
5         int[] numbers = {7, 2, 9, 1, 6, 5};
6
7         Arrays.sort(numbers);
8
9         System.out.println("The sorted array is: " + Arrays.toString(numbers));
10    }
11 }
12
13
```

<terminated> arraysort [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (2)
The sorted array is: [1, 2, 5, 6, 7, 9]

6. Create an array of strings and use the Arrays class method binarySearch() to find the index of a specific string in the array.

Codeshare link : <https://codeshare.io/yo0bpl>



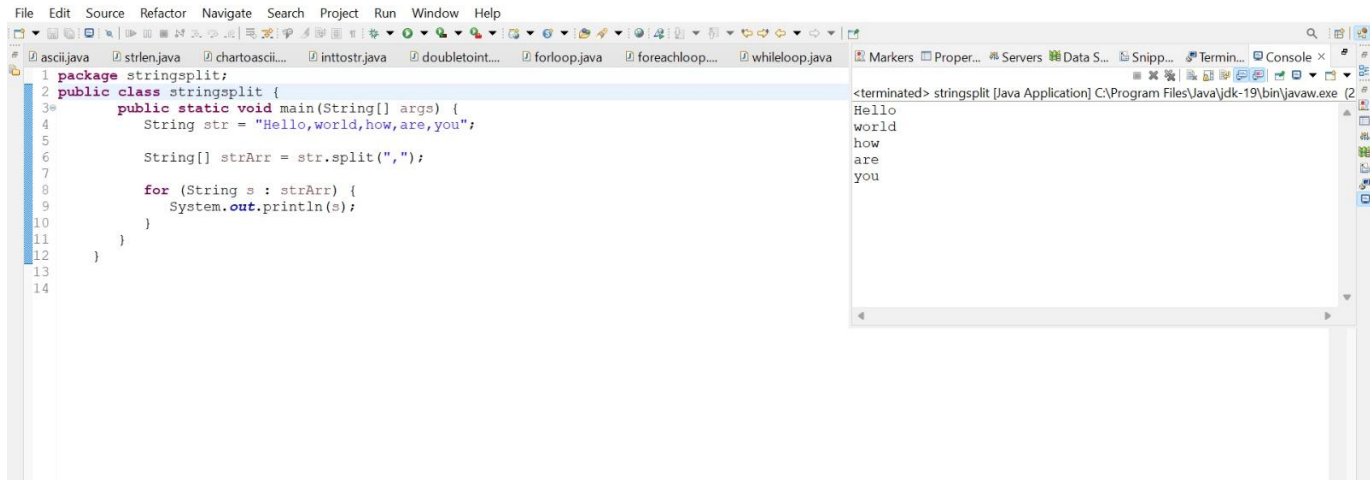
The screenshot shows an IDE with a Java file named 'binarysearch.java'. The code defines a class 'binarysearch' with a 'main' method. Inside 'main', a String array 'names' is initialized with values {"Ravi", "Raj", "Charlie", "Ram", "Ravana"}. The 'Arrays.binarySearch(names, "Ravana")' method is called to find the index of 'Ravana'. Finally, 'System.out.println' is used to print the index. The console output on the right shows the message: 'The index of 'Ravana' is: 4'.

```
1 package binarysearch;
2 import java.util.Arrays;
3 public class binarysearch{
4     public static void main(String[] args) {
5         String[] names = {"Ravi", "Raj", "Charlie", "Ram", "Ravana"};
6
7         int index = Arrays.binarySearch(names, "Ravana");
8
9         System.out.println("The index of 'Ravana' is: " + index);
10    }
11 }
12
13
```

<terminated> binarysearch [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe
The index of 'Ravana' is: 4

7. Create a string and use the String class method `split()` to split the string into an array of substrings.

Codeshare link: <https://codeshare.io/78m3lr>



The screenshot shows an IDE with a Java file named `stringsplit.java`. The code defines a `stringsplit` class with a `main` method. It creates a string `str = "Hello,world,how,are,you";`, splits it into an array `strArr` using `str.split(",")`, and prints each element of the array in a loop. The console output shows the words "Hello", "world", "how", "are", and "you" on separate lines.

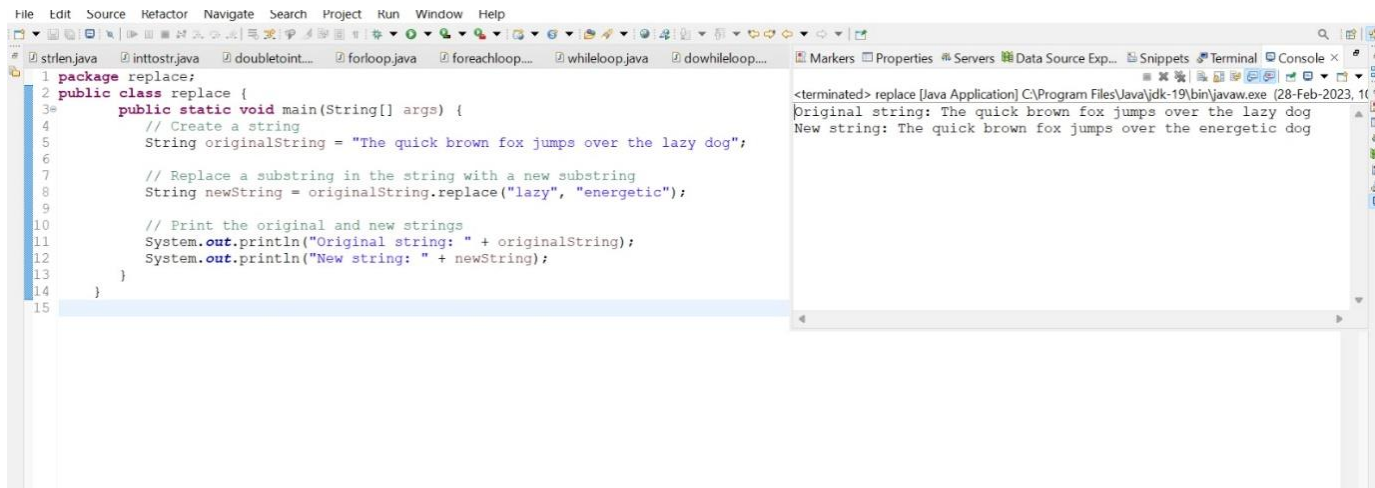
```
1 package stringsplit;
2 public class stringsplit {
3     public static void main(String[] args) {
4         String str = "Hello,world,how,are,you";
5
6         String[] strArr = str.split(",");
7
8         for (String s : strArr) {
9             System.out.println(s);
10        }
11    }
12 }
13
14
```

Console output:

```
<terminated> stringsplit [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (2
Hello
world
how
are
you
```

8. Create a string and use the String class method `replace()` to replace a specific substring in the string with a new substring.

Codeshare link: <https://codeshare.io/78m3Dr>



The screenshot shows an IDE with a Java file named `replace.java`. The code defines a `replace` class with a `main` method. It creates a string `originalString = "The quick brown fox jumps over the lazy dog";`, replaces the substring "lazy" with "energetic" using `originalString.replace("lazy", "energetic");`, and prints both the original and the new string. The console output shows the original string and the modified string where "lazy" has been replaced by "energetic".

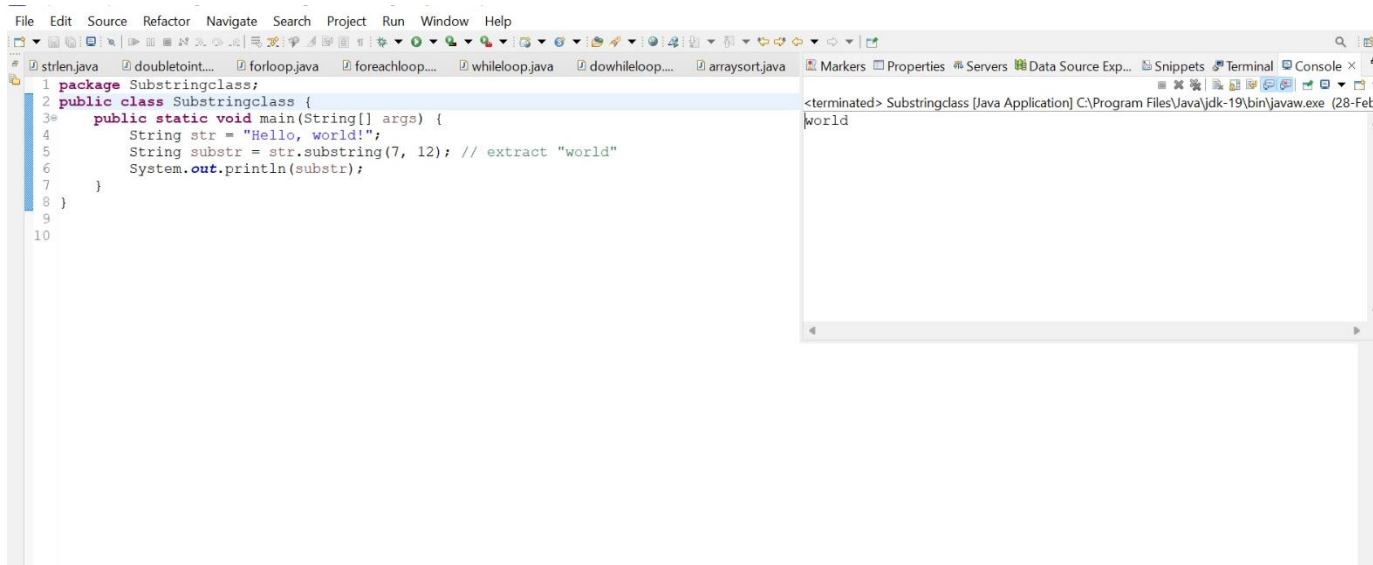
```
1 package replace;
2 public class replace {
3     public static void main(String[] args) {
4         // Create a string
5         String originalString = "The quick brown fox jumps over the lazy dog";
6
7         // Replace a substring in the string with a new substring
8         String newString = originalString.replace("lazy", "energetic");
9
10        // Print the original and new strings
11        System.out.println("Original string: " + originalString);
12        System.out.println("New string: " + newString);
13    }
14 }
15
```

Console output:

```
<terminated> replace [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2023, 11:00:00 AM)
Original string: The quick brown fox jumps over the lazy dog
New string: The quick brown fox jumps over the energetic dog
```

9. Create a string and use the String class method `substring()` to extract a portion of the string.

Codeshare link: <https://codeshare.io/pqkQYY>

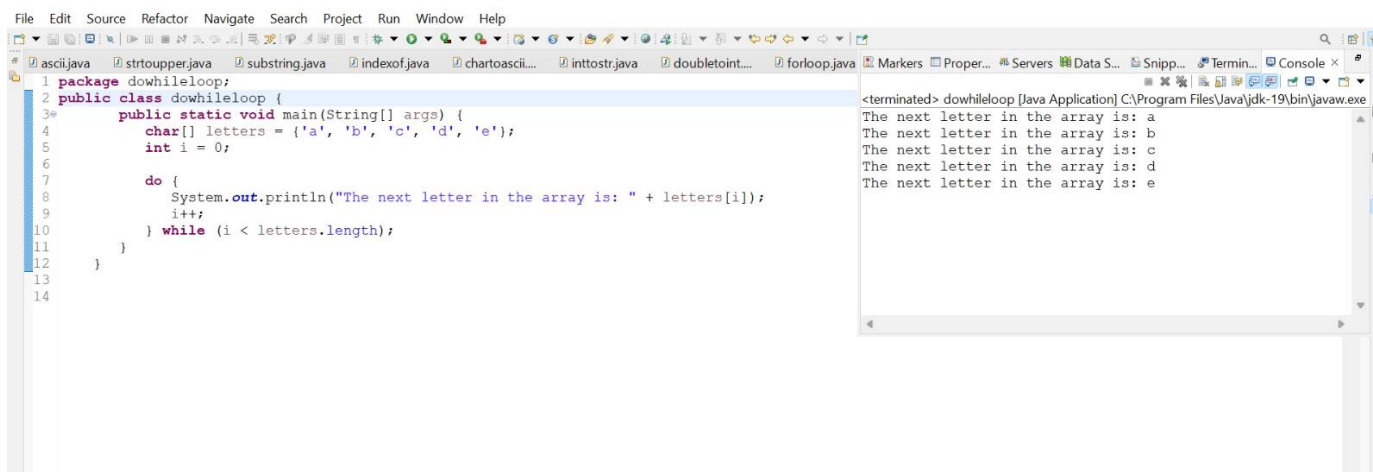


```
1 package Substringclass;
2 public class Substringclass {
3     public static void main(String[] args) {
4         String str = "Hello, world!";
5         String substr = str.substring(7, 12); // extract "world"
6         System.out.println(substr);
7     }
8 }
9
10
```

The console output shows: `<terminated> Substringclass [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (28-Feb-2025) world`

10. Create a string and use the String class method `length()` to find the length of the string.

Codeshare link: <https://codeshare.io/QnE97L>



```
1 package dowhileloop;
2 public class dowhileloop {
3     public static void main(String[] args) {
4         char[] letters = {'a', 'b', 'c', 'd', 'e'};
5         int i = 0;
6
7         do {
8             System.out.println("The next letter in the array is: " + letters[i]);
9             i++;
10        } while (i < letters.length);
11    }
12 }
13
14
```

The console output shows: `<terminated> dowhileloop [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe`
The next letter in the array is: a
The next letter in the array is: b
The next letter in the array is: c
The next letter in the array is: d
The next letter in the array is: e