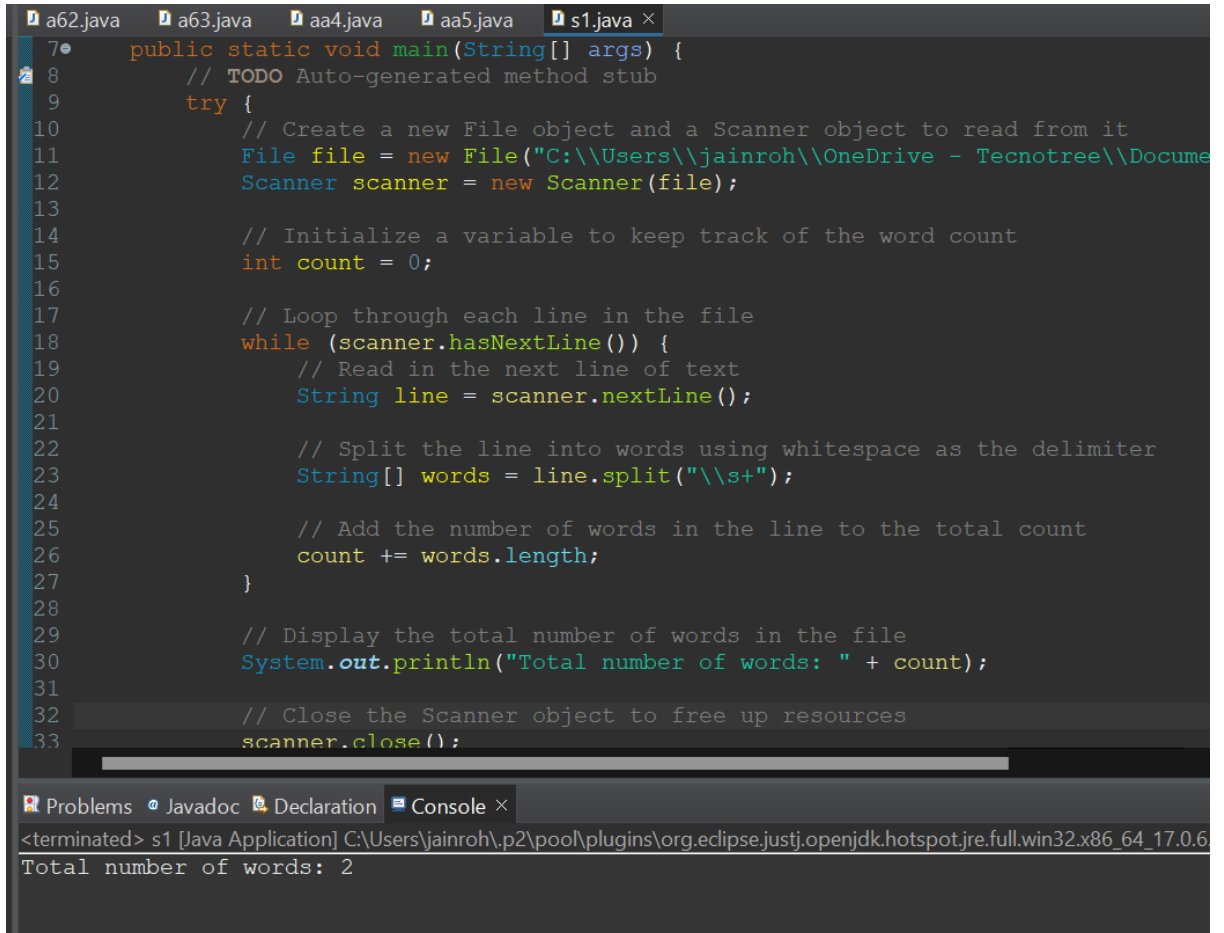


Assignment 7:

Name : Rohan Jain T B

- 1) Create a program that reads in a text file and counts the number of words in the file. The program should display the total number of words at the end.

<https://codeshare.io/JbMNr6>



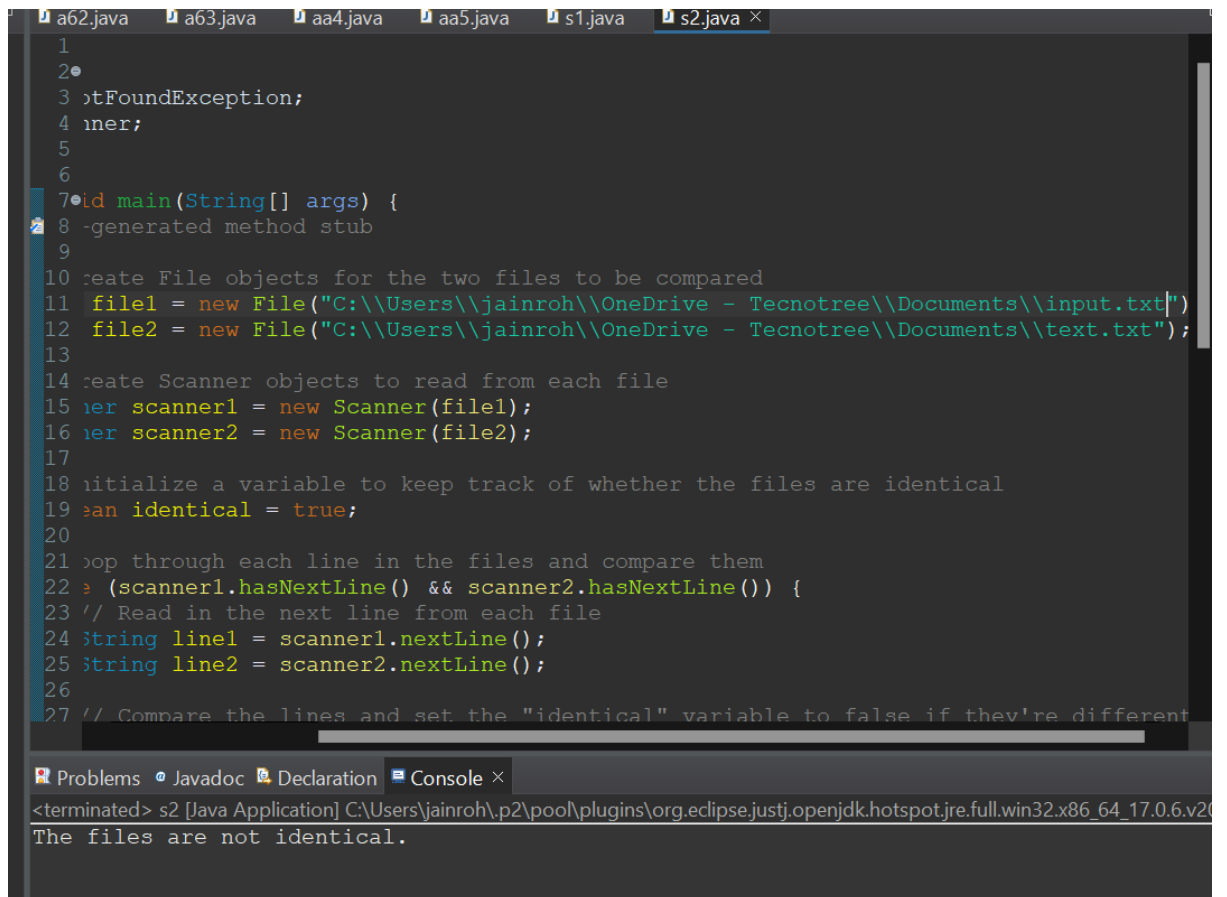
```
7 public static void main(String[] args) {
8     // TODO Auto-generated method stub
9     try {
10        // Create a new File object and a Scanner object to read from it
11        File file = new File("C:\\Users\\jainroh\\OneDrive - Tecnotree\\Documents\\text.txt");
12        Scanner scanner = new Scanner(file);
13
14        // Initialize a variable to keep track of the word count
15        int count = 0;
16
17        // Loop through each line in the file
18        while (scanner.hasNextLine()) {
19            // Read in the next line of text
20            String line = scanner.nextLine();
21
22            // Split the line into words using whitespace as the delimiter
23            String[] words = line.split("\\s+");
24
25            // Add the number of words in the line to the total count
26            count += words.length;
27        }
28
29        // Display the total number of words in the file
30        System.out.println("Total number of words: " + count);
31
32        // Close the Scanner object to free up resources
33        scanner.close();
34    } catch (IOException e) {
35        e.printStackTrace();
36    }
37 }
```

Problems Javadoc Declaration Console ×

<terminated> s1 [Java Application] C:\Users\jainroh\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6
Total number of words: 2

- 2) Create a program that reads in two text files and compares them to see if they are identical. The program should display a message indicating whether the files are identical or not.

<https://codeshare.io/lonyp8>



```
1
2
3 >FileNotFoundException;
4 inner;
5
6
7 public main(String[] args) {
8 // Auto-generated method stub
9
10 // Create File objects for the two files to be compared
11 File file1 = new File("C:\\Users\\jainroh\\OneDrive - Tecnotree\\Documents\\input.txt");
12 File file2 = new File("C:\\Users\\jainroh\\OneDrive - Tecnotree\\Documents\\text.txt");
13
14 // Create Scanner objects to read from each file
15 Scanner scanner1 = new Scanner(file1);
16 Scanner scanner2 = new Scanner(file2);
17
18 // Initialize a variable to keep track of whether the files are identical
19 boolean identical = true;
20
21 // Loop through each line in the files and compare them
22 while (scanner1.hasNextLine() && scanner2.hasNextLine()) {
23 // Read in the next line from each file
24 String line1 = scanner1.nextLine();
25 String line2 = scanner2.nextLine();
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27 // Compare the lines and set the "identical" variable to false if they're different
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```

4) Create a program that reads in a CSV file containing student grades, and calculates the average grade for each student. The program should then write the results to a new CSV file.

<https://codeshare.io/mpb7pw>

```
a62.java a63.java aa4.java aa5.java s1.java s2.java s3.java s4.java x
31 String[] fields = line.split(",");
32
33 // Extract the student name and grade from the fields
34 String student = fields[0];
35 int grade = Integer.parseInt(fields[1]);
36
37 // Update the total grade and number of grades for the student
38 if (totalGrades.containsKey(student)) {
39     totalGrades.put(student, totalGrades.get(student) + grade);
40     numGrades.put(student, numGrades.get(student) + 1);
41 } else {
42     totalGrades.put(student, grade);
43     numGrades.put(student, 1);
44 }
45 }
46
47 // Loop through each student in the Map and calculate their average
48 for (String student : totalGrades.keySet()) {
49     int total = totalGrades.get(student);
50     int num = numGrades.get(student);
51     double average = (double) total / num;
52
53     // Write the student name and average grade to the output file
54     writer.println(student + "," + average);
55 }
56
57 // Close the Scanner and PrintWriter objects to free up resources
```

5) Create a program that reads in a binary file containing image data, and displays the image on the screen.

<https://codeshare.io/yo0Aoe>

```
a62.java a63.java aa4.java aa5.java s1.java s2.java s3.java s4.java *s5.java x
19 JFrame frame = new JFrame("Image Viewer");
20 frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
21
22 // Create a JPanel to hold the image and add it to the JFrame
23 JPanel panel = new JPanel() {
24     @Override
25     public void paintComponent(Graphics g) {
26         super.paintComponent(g);
27         g.drawImage(image, 0, 0, null);
28     }
29 };
30 panel.setPreferredSize(new Dimension(image.getWidth(), image.getHeight()));
31 frame.getContentPane().add(panel);
32
33 // Set the size of the JFrame based on the size of the image and show
34 frame.pack();
35 frame.setVisible(true);
36
37 } catch (IOException e) {
38     // Handle the case where the file is not found or cannot be read
39     System.out.println("Error reading file: " + e.getMessage());
40 }
41
42 }
43
44 }
45
```