

Assignment-7

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.

Code:

Question1.java

```
1 package com.tecnotree.Assignment7;
2
3 import java.io.File;
4 import java.io.FileNotFoundException;
5 import java.util.Scanner;
6
7 public class Question1 {
8     public static void main(String[] args) {
9         int count = 0;
10
11         try {
12             File file = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input.txt");
13             Scanner scanner = new Scanner(file);
14
15             while (scanner.hasNext()) {
16                 String word = scanner.next();
17                 count++;
18             }
19
20             scanner.close();
21         } catch (FileNotFoundException e) {
22             System.out.println("File not found!");
23             System.exit(1);
24         }
25
26         System.out.println("Total number of words in the file: " + count);
27     }
28 }
```

Codeshare Link: <https://codeshare.io/oQ38Xo>

Output:

```
Total number of words in the file: 66
```

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.

Code:

Question2.java

```

1 package com.tecnotree.Assignment7;
2
3 import java.io.File;
4 import java.io.FileNotFoundException;
5 import java.util.Scanner;
6
7 public class Question2 {
8     public static void main(String[] args) {
9         try {
10             File file1 = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input.txt");
11             File file2 = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input2.txt");
12
13             Scanner scanner1 = new Scanner(file1);
14             Scanner scanner2 = new Scanner(file2);
15
16             boolean identical = true;
17
18             while (scanner1.hasNext() && scanner2.hasNext()) {
19                 String line1 = scanner1.nextLine();
20                 String line2 = scanner2.nextLine();
21
22                 if (!line1.equals(line2)) {
23                     identical = false;
24                     break;
25                 }
26             }
27
28             if (scanner1.hasNext() || scanner2.hasNext()) {
29                 identical = false;
30             }
31
32             scanner1.close();
33             scanner2.close();
34
35             if (identical) {
36                 System.out.println("The files are identical.");
37             } else {
38                 System.out.println("The files are not identical.");
39             }
40         } catch (FileNotFoundException e) {
41             System.out.println("File not found!");
42             System.exit(1);
43         }
44     }
45 }

```

Codeshare Link: <https://codeshare.io/LwEVvN>

Output:

```

terminated? Question2 (2) java / application / ...
The files are identical.

```

3.Create a program that reads in a text file and creates a new file that contains the same text, but with all the vowels removed.

Code:

Question3.java

```

1 package com.tecnotree.Assignment7;
2
3 import java.io.File;
4 import java.io.FileNotFoundException;
5 import java.io.PrintWriter;
6 import java.util.Scanner;
7
8 public class Question3 {
9     public static void main(String[] args) {
10         try {
11             File inputFile = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input.txt");
12             Scanner scanner = new Scanner(inputFile);
13
14             File outputFile = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\output.txt");
15             PrintWriter writer = new PrintWriter(outputFile);
16
17             while (scanner.hasNext()) {
18                 String line = scanner.nextLine();
19                 String modifiedLine = line.replaceAll("[aeiouAEIOU]", "");
20                 writer.println(modifiedLine);
21             }
22
23             scanner.close();
24             writer.close();
25
26             System.out.println("File with vowels removed created successfully!");
27         } catch (FileNotFoundException e) {
28             System.out.println("File not found!");
29             System.exit(1);
30         }
31     }
32 }

```

Codeshare Link: <https://codeshare.io/r9loxy>

Output:

```
terminated> Question3 (5) Java Application | C:\Program Files\Java\jdk-19\bin\javaw.exe
File with vowels removed created successfully!
```

Output.txt

```
1 package com.tcntr.ssgnmnt.;
2
3 import java.io.*;
4 import java.util.*;
5 import java.util.Scanner;
6
7 public class Qstn1 {
8     public static void main(String[] args) {
9         int cnt = 0;
10
11         try {
12             File fl = new File("npt.txt");
13             Scanner scnr = new Scanner(fl);
14
15             while (scnr.hasNext()) {
16                 String wrd = scnr.next();
17                 cnt++;
18             }
19
20             scnr.close();
21         } catch (FileNotFoundException e) {
22             e.printStackTrace();
23         }
24     }
25 }
```

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.

Code:

Question4.java

```

1 package com.tecnotree.Assignment7;
2
3 import java.io.File;
4 import java.io.FileNotFoundException;
5 import java.io.PrintWriter;
6 import java.util.Scanner;
7
8 public class Question4 {
9     public static void main(String[] args) {
10         try {
11             File inputFile = new File("input.csv");
12             Scanner scanner = new Scanner(inputFile);
13
14             File outputFile = new File("output.csv");
15             PrintWriter writer = new PrintWriter(outputFile);
16
17             while (scanner.hasNext()) {
18                 String line = scanner.nextLine();
19                 String[] values = line.split(",");
20
21                 int totalGrade = 0;
22                 for (int i = 1; i < values.length; i++) {
23                     totalGrade += Integer.parseInt(values[i]);
24                 }
25
26                 double averageGrade = (double) totalGrade / (values.length - 1);
27                 writer.println(values[0] + "," + String.format("%.2f", averageGrade));
28             }
29
30             scanner.close();
31             writer.close();
32
33             System.out.println("File with average grades created successfully!");
34         } catch (FileNotFoundException e) {
35             System.out.println("File not found!");
36             System.exit(1);
37         }
38     }
39 }

```

Codeshare Link: <https://codeshare.io/yo0ymo>

Output:

```

terminated> Question4 (2) Java Application\ C:\Program Files\Java
File not found!

```

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

Code:

JFrame.java

```

1 package com.tecnotree.Assignment7;
2
3 import java.awt.*;
4
5 public class Question5 extends JFrame {
6     /**
7      *
8      */
9     private static final long serialVersionUID = 5196468031802308944L;
10     private Image image;
11
12     public Question5(String filename) {
13         super("Image Display");
14         try {
15             FileInputStream fis = new FileInputStream("Screenshot_20230228_103");
16             int width = 640; // specify the width of the image
17             int height = 480; // specify the height of the image
18             int[] pixels = new int[width * height];
19
20             // read in the image data
21             for (int i = 0; i < pixels.length; i++) {

```

Codeshare Link: <https://codeshare.io/Ad1LOv>

Output:

```
terminated> Questions (5) [Java Application] C:\Program Files\Java\jdk-13\bin\javac
Usage: java DisplayImage <filename>
```