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.

https://codeshare.io/OdERAA

```java
package com.tecnotree.Assignment7;

import java.io.File;
import java.io.FileNotFoundException;
import java.util.Scanner;

public class Question1 {
    public static void main(String[] args) {
        int count = 0;

        try {
            File file = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input.txt");
            Scanner scanner = new Scanner(file);

            while (scanner.hasNext()) {
                String word = scanner.next();
                count++;
            }

            scanner.close();
        } catch (FileNotFoundException e) {
            System.out.println("File not found!");
            System.exit(1);
        }

        System.out.println("Total number of words in the file: " + count);
    }
}
```

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.

https://codeshare.io/6pkEXg

```java
package com.tecnotree.Assignment7;

import java.io.File;
import java.io.FileNotFoundException;
import java.util.Scanner;

public class Question2 {
    public static void main(String[] args) {
        try {
            File file1 = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input.txt");
            File file2 = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input2.txt");

            Scanner scanner1 = new Scanner(file1);
            Scanner scanner2 = new Scanner(file2);

            boolean identical = true;

            while (scanner1.hasNext() && scanner2.hasNext()) {
                String line1 = scanner1.nextLine();
                String line2 = scanner2.nextLine();

                if (!line1.equals(line2)) {
                    identical = false;
                    break;
                }
            }

            if (scanner1.hasNext() || scanner2.hasNext()) {
                identical = false;
            }

            scanner1.close();
            scanner2.close();

            if (identical) {
                System.out.println("The files are identical.");
            } else {
                System.out.println("The files are not identical.");
            }
        } catch (FileNotFoundException e) {
            System.out.println("File not found!");
            System.exit(1);
        }
    }
}
```

Output:

```
<terminated> Question2 (2) [Java Application] C:\Pro
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.

https://codeshare.io/K8ERBX

```java
package com.tecnotree.Assignment7;

import java.io.File;
import java.io.FileNotFoundException;
import java.io.PrintWriter;
import java.util.Scanner;

public class Question3 {
    public static void main(String[] args) {
        try {
            File inputFile = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\input.txt");
            Scanner scanner = new Scanner(inputFile);

            File outputFile = new File("C:\\Users\\fawazmo\\eclipse-workspace\\Assignment-7\\src\\com\\tecnotree\\Assignment7\\output.txt");
            PrintWriter writer = new PrintWriter(outputFile);

            while (scanner.hasNext()) {
                String line = scanner.nextLine();
                String modifiedLine = line.replaceAll("[aeiouAEIOU]", "");
                writer.println(modifiedLine);
            }

            scanner.close();
            writer.close();

            System.out.println("File with vowels removed created successfully!");
        } catch (FileNotFoundException e) {
            System.out.println("File not found!");
            System.exit(1);
        }
    }
}
```

Output:

```
<terminated> Question3 (3) [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.
File with vowels removed created successfully!
```

Output.txt

```
pckg cm.tcntr.ssgnmnt/;

mprt jv..Fl;
mprt jv..FlNtFndxcptn;
mprt jv.tl.Scnnr;

pblc clss Qstn1 {
    pblc sttc vd mn(Strng[] rgs) {
        nt cnt = 0;

        try {
            Fl fl = nw Fl("npt.txt");
            Scnnr scnnr = nw Scnnr(fl);

            whl (scnnr.hsNxt()) {
                Strng wrd = scnnr.nxt();
                cnt++;
            }

            scnnr.cls();
        } ctch (FlNtFndxcptn ) {
```

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/dwQn4y

```java
package com.tecnotree.Assignment7;

import java.io.File;
import java.io.FileNotFoundException;
import java.io.PrintWriter;
import java.util.Scanner;

public class Question4 {
    public static void main(String[] args) {
        try {
            File inputFile = new File("input.csv");
            Scanner scanner = new Scanner(inputFile);

            File outputFile = new File("output.csv");
            PrintWriter writer = new PrintWriter(outputFile);

            while (scanner.hasNext()) {
                String line = scanner.nextLine();
                String[] values = line.split(",");

                int totalGrade = 0;
                for (int i = 1; i < values.length; i++) {
                    totalGrade += Integer.parseInt(values[i]);
                }

                double averageGrade = (double) totalGrade / (values.length - 1);
                writer.println(values[0] + "," + String.format("%.2f", averageGrade));
            }

            scanner.close();
            writer.close();

            System.out.println("File with average grades created successfully!");
        } catch (FileNotFoundException e) {
            System.out.println("File not found!");
            System.exit(1);
        }
    }
}
```

Output:

```
<terminated> Question4 (2) [Java Application] C:\Program Files\Ja
File not found!
```

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

https://codeshare.io/JbMRAn

```
1 package com.tecnotree.Assignment7;
2
3*import java.awt.*;
7
8 public class Question5 extends JFrame {
9*    /**
10     *
11     */
12    private static final long serialVersionUID = 5196468031802308944L;
13    private Image image;
14
15*   public Question5(String filename) {
16        super("Image Display");
17        try {
18            FileInputStream fis = new FileInputStream("Screenshot_20230228_103
19            int width = 640; // specify the width of the image
20            int height = 480; // specify the height of the image
21            int[] pixels = new int[width * height];
22
23            // read in the image data
24            for (int i = 0; i < pixels.length; i++) {
```

Output:

```
<terminated> Question5 (5) [Java Application] C:\Program Files\Java\jdk-19\bin\j
Usage: java DisplayImage <filename>
```