Credit Name: CSE3010 - Computer Science 3

Assignment Name: Roster.java

How has your program changed from planning to coding to now? Please explain?

both versions asked for the file name, the number of students and the first and last names of the students.

The main difference between the first version and the final version is that the first version used writeFile instead of writeObject to write and add a list of each students first and last name to the the file named by the user.

Image of First version Below:

```
package Mastery;

import java.io.BufferedReader;
import java.io.BufferedWriter;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.IOException;
import java.text.NumberFormat;
import java.util.Scanner;



public class Roster2
{

	public static void giveStuName(StuName emp)
	{

		System.out.println(emp);


	}

	public static void main(String[] args)
	{
		File dataFile;
		FileReader in;
		FileWriter out;

		BufferedReader readFile;
		BufferedWriter writeFile;

		File textFile;
		Scanner input = new Scanner(System.in);
		String fileName;
		String response;
		String stuName;
		int numStu;



		//create the file
		textFile = new
File("C:\\Users\\26031001\\git\\CS30Fall2023\\Chapter11\\src\\Mastery\\St
udentNames.txt");

		/*fileName = textFile;*/

		//Obtain file name and the number of students from the
user/Write data to file
```

```
            System.out.println("Enter the file name for storing the
students names: ");
            fileName = input.nextLine();


            System.out.println("How many students? ");
            numStu = input.nextInt();



            /*int empNum;

            System.out.println("Enter Employee number (1 or 2) :");
            empNum = input.nextInt();

            switch(empNum)
            {
                  case 1: emp = emp1; break;

            }*/

            //Determine/Check to see if the file exists
            textFile = new File(fileName);

            if(textFile.exists())
            {
                  System.out.println("StudentNames.txt file exists! ");
            }
            else
            {
                  try
                  {
                        textFile.createNewFile();
                        System.out.println("StudentNames.txt file has been
created! ");
                  }
                  catch(IOException e)
                  {

                        System.out.println("File could not be created. ");
                        System.err.print("IOException: " +
e.getMessage());
                  }

                  System.out.println("File Does Not Exists! ");
            }

                        try
                        {

                              dataFile = new File(fileName);
                              out = new FileWriter(dataFile);
                              writeFile = new BufferedWriter(out);









                              for(int i = 0; i < numStu; i++)
                              {
                                    System.out.println("Enter the students
 name: ");
                                    /*stuName = input.next();*/
                                    System.out.println("First name: ");
```

```
                                    System.out.println("First name: ");
                                    String firstName = input.next();
                                    System.out.println("Last name: ");
                                    String lastName = input.next();

                                    stuName = firstName + " " + lastName;

                                    /*StuName emp1 = new StuName(firstName,
lastName);
                                 static final "tiger plush"; "sticker"; "
", " " stuName
                                    StuName emp = emp1;*/

                                    writeFile.write(firstName);
                                    writeFile.newLine();
                                    writeFile.write(lastName);
                                    writeFile.newLine();

                              }
                              writeFile.close();
                              out.close();
                              System.out.println("Data written to file!
");

                        }catch (IOException e)
                        {
                              System.out.println("File could not be
created. ");
                              System.err.println("IOException: "+
e.getMessage());
                        }

                        //Read data from file and process
                        try
                        {
                              dataFile = new File(fileName);
                              in = new FileReader(dataFile);
                              readFile = new BufferedReader(in);

                              while((stuName = readFile.readLine()) !=
null)
                              {
                                    /*score = readFile.readLine();*/
                                    System.out.println(stuName + " " + "
");
                                    /*System.out.println();*/

                              }//end of while loop









                                 readFile.close();
                                 in.close();

                          }catch(FileNotFoundException e)
                          {
                                 System.out.println("File does not exist. ");
                                 System.err.println("FileNotFoundException:
 "+ e.getMessage());
                          }
                          catch (IOException e)
                          {
                                 System.out.println("File could not created.
```

```
                              System.out.println("File could not created.
");
                              System.err.println("IOException: "+
e.getMessage());
                        }

                        //Delete the file if user chooses
                        System.out.println("Would you like to (K)eep or
(D)elete the file? ");
                        response = input.next();

                        if(response.equalsIgnoreCase("D"))//Delete file
                        {
                              if(textFile.delete())
                              {
                                    System.out.println("StudentNames.txt
File has been deleted. ");
                              }
                        }
                        else
                        {
                              if(response.equalsIgnoreCase("K"))//Keep
file
                              {
                                    System.out.println("StudentNames.txt
File is kept and stays the same. ");
                              }
                        }

      }

}
```

Image of final version Below:

```
package Mastery;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.util.Scanner;
```

```
import java.util.Scanner;



public class Roster
{


      public static void main(String[] args)
      {


            File textFile;
            Scanner input = new Scanner(System.in);
            String fileName;
            int numStu;



            //create the file
            textFile = new
File("C:\\Users\\26031001\\git\\CS30Fall2023\\Chapter11\\src\\Mastery\\St
udentNames.txt");

            /*fileName = textFile;*/

            //Obtain file name and the number of students from the
user/Write data to file
            System.out.println("Enter the file name for storing the
students names: ");
            fileName = input.nextLine();


            System.out.println("How many students? ");
            numStu = input.nextInt();

            /*System.out.println("Enter the students name: ");
            System.out.println("First name: ");
            String firstName = input.next();
            System.out.println("Last name: ");
            String lastName = input.next();

            stuName = firstName + " " + lastName;









             writeFile.write(firstName);
             writeFile.newLine();
             writeFile.write(lastName);
             writeFile.newLine();


             writeFile.close();
             out.close();
             System.out.println("Data written to file! ");*/

                        try
                        {
                              /* write objects*/

                              FileOutputStream out = new
 FileOutputStream(textFile);
                              ObjectOutputStream writeStu = new
```

```
                              ObjectOutputStream writeStu = new
ObjectOutputStream(out);


                              for(int i =0; i < numStu; i++)
                              {
                                    //Enter fn
                                    System.out.println("Enter the students
name: ");
                                    System.out.println("Enter the First
Name: ");
                                    String firstName = input.next();

                                    //Enter ln
                                    System.out.println("Enter the Last
Name: ");
                                    String lastName = input.next();

                                    String fn = firstName;
                                    String ln = lastName;

                                    /*firstName = fn;

                                    lastName = ln;*/

                                    writeStu.writeObject(new StuName(fn,
ln));

                              }
                              writeStu.close();
                              System.out.println("Data written to file!
");

                              /* read objects*/
                              FileInputStream in = new
FileInputStream(textFile);
```

```
                        ObjectInputStream readStu = new
ObjectInputStream(in);


                        for(int i =0; i < numStu; i++)
                        {

     System.out.println((StuName)readStu.readObject());
                        }

                        readStu.close();


                  }catch(FileNotFoundException e)
                  {
                        System.out.println("File could not be found
or File does not exist. ");
                        System.err.println("FileNotFoundException:
"+ e.getMessage());
                  }
                  catch (IOException e)
                  {
                        System.out.println("Problem with
input/output or File could not created. ");
                        System.err.println("IOException: "+
e.getMessage());
```

```
                        }
                        catch (ClassNotFoundException e)
                        {
                              System.out.println("Class could not be used
to cast object. ");
                              System.err.println("ClassNotFoundException:
"+ e.getMessage());
                              // TODO Auto-generated catch block
                              e.printStackTrace();
                        }



            }

}
```