

***** PROJECT 0A Hardcopy (pdf file) *****

***** Cover page *****

Class: 323

Name: Adewole Adeoshun

Project: Project 0A

Project name: Java I/O & project submission exercise

Language: Java

Due date: 8/31/2025, Sunday before midnight, 11:59pm

Submit date: 9/9/2025

Top level algorithm steps

Step 0: inFile \leftarrow open from args [0]
outFile \leftarrow open from args [1]

Step 1: numOfRows \leftarrow read from inFile.

Step 2: Persons people[] \leftarrow new Person[numOfRows]; // create an array of Persons;

Step 3: index \leftarrow 0 // set initial counter to 0

Step 4: line \leftarrow read one row of data from inFile.

Step 5: name, age \leftarrow parse the name and age from the line

Step 6: p \leftarrow new Person (name, age) // create the Person object

Step 7: people[index++] = p; // save the person

Step 8: repeat steps 4 to 7 while index < numOfRows

Step 9: For each person in people array, print the person.

Step 10: close inFile, outFile.

Illustration:

None

Source code

```
import java.io.BufferedReader;

import java.io.FileReader;

import java.io.BufferedWriter;

import java.io.FileWriter;

import java.io.IOException;

// Class to represent a person with a name and age

class Person {

    private String name;

    private int age;

    // Constructor to initialize a Person object

    Person(String name, int age) {

        this.name = name;

        this.age = age;

    }

    // Method to print person details into a file with the required format

    void printPerson(BufferedWriter writer) throws IOException {

        String describe = name + " is " + age + " years old.";

        writer.write(describe + "\n");

    }

}
```

```
}

// Main class for Project 0A

class AdeoshunA_Project0A_Main {

    public static void main(String args[]) throws IOException {

        // args[0] = input file name

        // args[1] = output file name

        // Create file reader to read input data

        BufferedReader reader = new BufferedReader(new FileReader(args[0]));

        // Create file writer to write program output

        BufferedWriter writer = new BufferedWriter(new FileWriter(args[1]));

        // First line of input contains number of people

        String line = reader.readLine();

        int numOfPeople = Integer.parseInt(line);

        // Array to hold Person objects

        Person people[] = new Person[numOfPeople];

        // Read each line, extract name and age, create Person object

        int index = 0;

        while (index < numOfPeople) {

            line = reader.readLine();

            String data[] = line.split(" "); // split line into name and age

            String name = data[0];

            int age = Integer.parseInt(data[1]);

            Person p = new Person(name, age);
```

```
people[index++] = p; // add person to array
}

// Write header line before listing people
writer.write("*** There are " + numOfPeople + " people ***\n");

// Loop through array and write each person's details
for (Person person : people) {
    person.printPerson(writer);
}

// Close both reader and writer streams
reader.close();
writer.close();
}
}
```

Output

*** There are 7 people ***

Sean is 24 years old.

Pamela is 29 years old.

Mark is 22 years old.

Danial is 17 years old.

John is 18 years old.

Eric is 24 years old.

Jessica is 23 years old.

