********** COVER PAGE **********
Class: CV
Name: Loyd Flores
Project: Project 0B
Project name: Java project submission exercise
Language: C++
Due Date: 9/6/2024 Friday before midnight
Submit date: 09/03/2024

==========
Top level algorithm steps
==========
Step 0: inFile ← open from argv [1]
outFile ← open from argv [2]
Step 1: numOfRows ← read from inFile.
Step 2: Person people [] ← new Person[numOfRows]; // create an array of Persons;
Step 3: index ← 0 //set initial counter to 0
Step 4: name ← read from inFile.
Step 5: age ← read from inFile
Step 6: p ← new Person (name, age) // create the Person object
Step 7: people [index++] = p; // save the person in the array
Step 8: repeat steps 4 to 7 while index < numOfRows
Step 9: For each person in the people array, print the person.
Step 10: delete all allocations
Step 11 : close inFile, outFile.
==========
Illustration: None
==========

********** SOURCE CODE **********

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;

class Person {
    private:
        string name;
        int age;

    public:
        Person(string name, int age){
            this->name = name;
            this->age = age;
        } // end Person constructor

        void printPerson(ofstream & ofile){
            ofile << name << " is " << age << " years old. \n";
        } // end printPerson

}; // end class Person


int main(int argc, char** argv){
    // Error Handling
    if(argc != 3){
        cout << "Your comment line needed to include two parameters: input
file and output file \n";
        exit(1);
    } // end if(argc != 3)

    ifstream inFile (argv[1]); // input file
    if(!inFile.is_open()){
        cout << "Unable to open the input file" << endl;
        exit(1);
    } // end !inFile.is_open()

    ofstream outFile(argv[2]);
    if (!outFile.is_open()){
```

```
        cout << "Unable to open the output file" << endl;
        exit(1);
     } // end !outFile.is_open()

    // Main functionality
    int numOfPeople;
    inFile >> numOfPeople;
    outFile << "*** There are " << numOfPeople << " people ***" << "\n";
    Person** people = new Person*[numOfPeople];

    string Tname;
    int Tage;
    int index = 0;
    while (index < numOfPeople){
        inFile >> Tname;
        inFile >> Tage;
        Person* p = new Person(Tname, Tage);
        people[index++] = p;
    } // end while();

    for(int index = 0; index < numOfPeople; index++){
        people[index] -> printPerson(outFile);
    } // end for ();

    // Clear Memory
    for(int index = 0; index < numOfPeople; index++){
        delete people[index];
    }

    delete[] people;

    inFile.close();
    outFile.close();
    exit(0);
} // end-main
```

********** PROGRAM INPUT **********
4
Emily 24
Ben 29
Mark 22
Lisa 17
********** PROGRAM OUTPUT **********
*** There are 4 people ***
Emily is 24 years old.
Ben is 29 years old.
Mark is 22 years old.
Lisa is 17 years old.