

## *COSC 1560 – Computer Programming II*

### **Assignment 8**

**Deadline April 11, 2022**

A program is required to store information for employees of a particular company. Each employee must have the following data:

Name  
Age  
Date Employed        (*Month, Day, Year*)

The data for all employees must be stored in a file named “Employees.txt”. The first line of the file should have an integer which indicates the number of employees currently stored in the file. Following the first line, each line contains information for one employee. The following are examples showing the format of each line:

```
3
Stephen Smith,25,12/15/2001
Susan Kim-Jones,33,1/9/2012
Praew Chaem Choi,52,8/22/1999
```

Note that each component of the employee’s information is separated by a ‘,’ and each element of the date employed is separated by a ‘/’.

An initial “Employees.txt” file has been placed in the course webpage. Use this file as a starting point for your program.

When the program begins execution, the file should be opened. The first line should be read, and an array of the appropriate size created. The employee information currently stored in the file should then be read and stored in the array. The current employee data should be displayed in the following format:

NAME	AGE	DATE EMPLOYED
Stephen Smith	25	12/15/2001
Susan Kim-Jones	33	01/09/2012
Praew Chaem Choi	52	08/22/1999

Ensure that the columns are aligned.

The user should then be asked if any additional employees need to be added to the list. If the answer is “yes”, then the number of new employees should be specified, and a new array of the appropriate size should be created. The existing employees’ data should be copied to the new array, and the additional employee information should be input and stored in the array. To input additional employee information, the following format should be followed:

NAME: Denise Lynch  
AGE: 22  
EMPLOYED: 12/22/2012

NAME: Arthit Bun Ma  
AGE: 35  
EMPLOYED: 03/19/2018

The revised array should then be displayed in the format described above. The contents of the array should be written to the file before the program terminates.

Required functions:

Employee\* readEmployees(const string& empFile, int& numEmps);

*The first argument, ‘empFile’, is the name of the file, passed as an argument when the function is called. The second argument, ‘numEmps’, should be assigned the number of employees read from the file. The function should return a pointer to the array allocated to store the employees read from the file.*

void displayEmployees(const Employee emps[], int numEmps);

*Display all employees in the first argument. The number of employees is passed as the second argument.*

Employee\* inputEmployees(Employee\* emps, int& numEmps);

*Input new employee details from the user. A pointer to the existing array of employees is passed as the first argument. The second argument is the number of existing employees. The function should update ‘numEmps’ and return a pointer to the newly-created array storing all employees.*

**THE DEPARTMENT STANDARDS FOR “STYLE GUIDELINES” SHOULD BE FOLLOWED IN ALL CODE.**