Lab test 2

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Source Code (Copy and paste your code below)

#include <iostream>

#include <fstream>

using namespace std;

struct person\_tag{

string name;

int age;

};

struct offical\_tag{

int dept\_id;

string companyName;

double salary;

};

struct employee\_tag{

person\_tag personal\_info;

offical\_tag offical\_info;

};

int read\_file(employee\_tag employee[], int sizeOfArray) {

fstream file;

file.open("employee.txt", fstream::in);

for (int i = 0; i < 100; i++) {

if (file.eof()) {

break;

}

file >> employee[i].personal\_info.name;

file >> employee[i].personal\_info.age;

file >> employee[i].offical\_info.dept\_id;

file >> employee[i].offical\_info.companyName;

file >> employee[i].offical\_info.salary;

sizeOfArray + 1;

}

file.close();

return employee, sizeOfArray;

}

int menu() {

int menuSelection;

cout << "Enter your choice:" << endl;

cout << "1. Display the grade details" << endl;

cout << "2. Print the employee's details who gets the highest salary in this database" << endl;

cout << "3. Find average salary of a particular company" << endl;

cout << "4. Exit program" << endl;

cin >> menuSelection;

return menuSelection;

}

int display(employee\_tag employee[], int sizeOfArray) {

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

cout << "Name: " << employee[i].personal\_info.name << endl;

cout << "Age: " << employee[i].personal\_info.age << endl;

cout << "Department ID: " << employee[i].offical\_info.dept\_id << endl;

cout << "Company Name: " << employee[i].offical\_info.companyName << endl;

cout << "Salary: " << employee[i].offical\_info.salary << endl;

cout << " " << endl;

}

}

int findMaximum(employee\_tag employee[], int sizeOfArray) {

int maxSalaryIndex;

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

for (int j = i + 1; j < sizeOfArray; j++) {

if (employee[i].offical\_info.salary > employee[j].offical\_info.salary) {

maxSalaryIndex = i;

}

}

}

return maxSalaryIndex;

}

double find\_average\_salary(employee\_tag employee[], int sizeOfArray, string searchCompany) {

int employeeNumbers = 0;

double SalaryTotal = 0;

double salaryAverage = 0;

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

if (employee[i].offical\_info.companyName == searchCompany) {

SalaryTotal = employee[i].offical\_info.salary + SalaryTotal;

employeeNumbers = employeeNumbers + 1;

}

}

salaryAverage = (SalaryTotal / employeeNumbers);

cout << "Avarage salary of " << searchCompany << " is: " << salaryAverage << endl;

}

int main()

{

// Vairaible Initilization

bool z = true;

employee\_tag employee[100];

int sizeOfArray = 0;

int maxSalaryIndex;

string searchCompany;

// Reading Data from File.

read\_file(employee, sizeOfArray);

// Size of Array

sizeOfArray = 5;

// Menu persistance.

while (z) {

int menuSelection = menu();

switch(menuSelection) {

case 1:

display(employee, sizeOfArray);

break;

case 2:

maxSalaryIndex = findMaximum(employee, sizeOfArray);

cout << "Name: " << employee[maxSalaryIndex].personal\_info.name << "\n Age: " << employee[maxSalaryIndex].personal\_info.age << "\n Department ID: " << employee[maxSalaryIndex].offical\_info.dept\_id << "\n Company Name: " << employee[maxSalaryIndex].offical\_info.companyName << "\n Salary: " << employee[maxSalaryIndex].offical\_info.salary << endl;

break;

case 3:

cout << "Enter Company Name:" << endl;

cin >> searchCompany;

find\_average\_salary(employee, sizeOfArray, searchCompany);

break;

case 4:

z = false;

cout << "Exiting Program..." << endl;

break;

}

}

return 0;

}

Screenshots of output window

A screenshot of a cell phone

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a cell phone

Description automatically generated