

Assignment 3

Martin Lillo



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Everett Community College

mrlillo@students.everettcc.edu

# Description

Write a brief description of what the assignment is about.

**Upgraded version of Programming Assignment 2**

# The Code (if more than one question, then specify the question and paste the code of every question)

Copy and paste the code of your questions.

**public** **class** Employee {

**private** **int** id = 0;

**private** String first = "";

**private** String last = "";

**private** String gender = "";

**private** String job = "";

**private** String org = "";

**private** String birthday = "";

**private** ArrayList<Employee> employees = **new** ArrayList<Employee>();

**private** **static** **int** *countEmployee* = 0;

**private** **static** **int** *countGoogle* = 0;

**private** **static** **int** *countMicrosoft* = 0;

// for id

**public** **int** max = 10000;

**public** **int** min = 1;

**public** **int** range = (max - min) + 1;

Employee (String first, String last, String gender, String job, String org, String birthday) {

**this**.first = first;

**this**.last = last;

**this**.setGender(gender);

**this**.setJob(job);

**this**.org = org;

**this**.birthday = birthday;

setId((**int**) (Math.*random*() \* range) - min);

**this**.id = id;

*countEmployee*++;

**if** (**this**.org.equalsIgnoreCase("Google")) {

*setCountGoogle*(*getCountGoogle*() + 1);

}

**else** {

*setCountMicrosoft*(*getCountMicrosoft*() + 1);

}

}

**public** Employee() {

//the method does nothing, used for initialization

}

**public** **int** getId() {

**return** id;

}

**public** **void** setId(**int** id) {

**this**.id = id;

}

**public** String getFirst() {

**return** first;

}

**public** **void** setFirst(String first) {

**this**.first = first;

}

**public** String getLast() {

**return** last;

}

**public** **void** setLast(String last) {

**this**.last = last;

}

**public** String getGender() {

**return** gender;

}

**public** **void** setGender(String gender) {

**this**.gender = gender;

}

**public** String getJob() {

**return** job;

}

**public** **void** setJob(String job) {

**this**.job = job;

}

**public** String getBirthday() {

**return** birthday;

}

**public** **void** setOrg(String org) {

**this**.org = org;

}

**public** String getOrg() {

**return** org;

}

**public** **void** setBirthday(String birthday) {

**this**.birthday = birthday;

}

**public** **static** **int** getCountGoogle() {

**return** *countGoogle*;

}

**public** **static** **void** setCountGoogle(**int** countGoogle) {

Employee.*countGoogle* = countGoogle;

}

**public** **static** **int** getCountMicrosoft() {

**return** *countMicrosoft*;

}

**public** **static** **void** setCountMicrosoft(**int** countMicrosoft) {

Employee.*countMicrosoft* = countMicrosoft;

}

**public** **static** **int** getCountEmployee() {

**return** *countEmployee*;

}

**public** **static** **void** setCountEmployee(**int** countEmployee) {

Employee.*countEmployee* = countEmployee;

}

**public** **void** addEmployee(Employee employee) {

employees.add(employee);

System.***out***.println("Employee added.");

}

**public** **void** removeEmployee(Employee employee) {

**boolean** remove = **true**;

**for** (**int** i = 0; i < employees.size(); i++) {

employee = employees.get(i);

**if** (first.equalsIgnoreCase(employee.getFirst())) {

employees.remove(i);

*countEmployee*--;

**if** (**this**.org.equalsIgnoreCase("Google")) {

*setCountGoogle*(*getCountGoogle*() - 1);

}

**else** {

*setCountMicrosoft*(*getCountMicrosoft*() - 1);

}

remove = **false**;

System.***out***.println("Employee Removed");

}

**else** {

System.***out***.println("Error: Employee not found.");

}

}

}

**public** **void** printEmployee(Employee employee) {

**for** (**int** i = 0; i < employees.size(); i++) {

System.***out***.println("ID: " + employees.get(i).getId());

System.***out***.println("Name: " + employees.get(i).getFirst() + " " + employees.get(i).getLast());

System.***out***.println("Gender: " + employees.get(i).getGender());

System.***out***.println("Job Title: " + employees.get(i).getJob());

System.***out***.println("Organization: " + employees.get(i).getOrg());

System.***out***.println("Birthdate: " + employees.get(i).getBirthday());

}

}

}

**public** **class** Caller {

/\*\*

\* **@param** args

\*/

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Scanner keyboard = **new** Scanner(System.***in***);

**char** choice;

Employee employee = **new** Employee();

*menu*();

**do** {

choice = keyboard.next().toLowerCase().charAt(0);

**switch** (choice) {

**case** 'a':

System.***out***.print("Enter employee first name: ");

String first = keyboard.next();

System.***out***.print("Enter employee last name: ");

String last = keyboard.next();

System.***out***.print("Enter employee gender: ");

String gender = keyboard.next();

System.***out***.print("Enter employee job title: ");

String job = keyboard.next();

System.***out***.print("Enter employee organization (Google or Microsoft): ");

String org = keyboard.next();

System.***out***.print("Enter employee birthday (mm/dd/yyyy): ");

String birthday = keyboard.next();

employee = **new** Employee(first, last, gender, job, org, birthday);

employee.addEmployee(employee);

*menu*();

**break**;

**case** 'r':

System.***out***.print("Enter employee first name: ");

first = keyboard.next();

employee.removeEmployee(employee);

*menu*();

**break**;

**case** 'c':

System.***out***.println("To change employee info, remove the old one and add the new one.");

*menu*();

**break**;

**case** 'n':

System.***out***.println("Total Employees: " + Employee.*getCountEmployee*());

System.***out***.println("Microsoft Employees: " + Employee.*getCountMicrosoft*());

System.***out***.println("Google Employees: " + Employee.*getCountGoogle*());

*menu*();

**break**;

**case** 'p':

employee.printEmployee(employee);

*menu*();

**break**;

**case** 'e':

System.***out***.println("Thank you. Come again!");

System.*exit*(0);

**break**;

**default**:

System.***out***.println("Error: Invaid choice");

*menu*();

**break**;

}

} **while** (**true**);

}

**public** **static** **void** menu() {

System.***out***.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

System.***out***.println("What do you want to do?");

System.***out***.println("a: Add an employee");

System.***out***.println("r: Remove an employee");

System.***out***.println("c: Change an employee's info");

System.***out***.println("n: Check number of employees");

System.***out***.println("p: Check last added employee");

System.***out***.println("e: Exit program");

}

}

# The output

Screenshots of your runs.

3 screenshots of 3 scenarios you tried in your program.

**A screenshot of a computer

Description automatically generated**

**A screenshot of a computer

Description automatically generated**

**A screenshot of a computer

Description automatically generated**

# Comments/Notes (Extra Credit)

The comments or the notes section is if you wanted extra credit. This could be struggles you have come over while doing your program, or additions you wanted to highlight so I notice while grading…

**This was the hardest assignment to complete for me because I felt that I could of done more but I just didn’t have the time for it. What was the hardest for me was trying to print out all of the employees recorded. I wasn’t sure what I was doing wrong and I don’t have someone that could conveniently help me. Some examples online weren’t helpful either. Regardless, I did the best I could. However, the instructions were unclear for me like do I need to do everything or just one thing off the category. I am really enjoying this class as it grew my passion for programming.**