

MIST352 Homework #3 (100 points)

Problem statement:

You are tasked with developing a Java application that interacts with the `employee_data.txt` file, containing employee information such as names, dates of birth, and roles. The application must use a Graphical User Interface (GUI) for operations like viewing employee details and searching for specific employees.

Requirements:

1. **Data Reading:** The application should efficiently read from `employee_data.txt`, enabling user interaction with the data.
2. **GUI Interaction:** Implement a GUI for viewing all employees, their roles, and for conducting searches by name or role.
3. **Class Restriction:** Use only the provided classes in the HW3 folder. You may add methods for testing, which should not be included in the final submission.
4. **Documentation:** Document your code with comments detailing each class and method's purpose and functionality.
5. **Functionality:** The program must be free from syntax errors. Non-functional programs will result in a significant deduction (up to 50% of the total grade).

Submission Instructions:

At the start of each Java class file, include a comment with your name, course details, homework number, and a note on whether ChatGPT was used. If ChatGPT assisted, include the used prompt.

Deliverables:

Push your completed work to your Homework folder on your GitHub repository in the HW3 directory. Confirm your submission by posting a comment on eCampus with your GitHub repository link.

Note: You may consult ChatGPT for one Java class in the HW3 folder. Document any assistance received according to the guidelines.

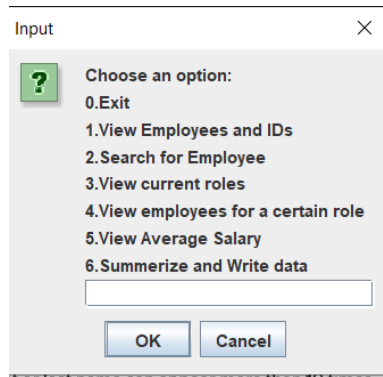
Instructions:

1. Pull the MIST352 repository and explore HW3 project under the Homeworks folder. Copy the HW3 project to your Homeworks folder of your local repository and open it in Eclipse.
 - a. Only code the methods where the documentation states (as `* You need to code this`).
 - b. Do not modify any methods where the documentation states (`* Keep as is`).
 - c. Do not add your own methods. **[5 points]**
2. The `DataSummary.java` is a class that has two private variables, `fileLocation` and `averageSalary`. This class allows you to create an object of the text file that has the employee's data. **[32 points]**
3. The `Employee.java` is a class that has 8 parameters as shown below. Do not add any setters or getters here, instead, initialize all parameters in the constructor. **[32 points]**

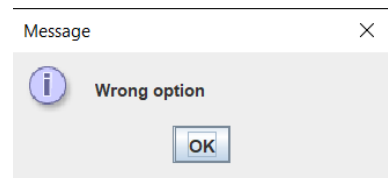
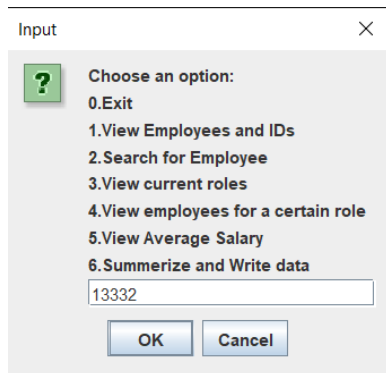
Employee
-name: String -dateOfBirth: String -role: String -employeeId: int -email: String -salary: double -aboveAvg: boolean -bar: String
+Employee(line: String) +setAboveAvg(dblAverage: double): void +SalaryBarChart(salary: double): String +SummerizeEmployee(): String

4. The `HW3.java` is the main method. Keep lines 26-35 as is and code a switch statement to evaluate the users input and inside the while loop. The switch statement should evaluate the number provided by the user, and then implement their request. All cases 1 through 5 will require you to use the object of type `myData` which is defined in line 34. For case 6, you need to read through the text file in the main method, and every time you read a line, you create an employee object using the line you just read. Run the program and see below:

[33 points]



- a. If the user type 0, then the program should exit, otherwise, the user should remain the in the program.
- b. If the user types of an invalid number, it should display wrong option as shown below:




- c. If the user types 1, then the program should display employees' information to the **console** as shown below:


Name:	Pamela Walker.	ID:	6792
Name:	Oliver Martin.	ID:	2529
Name:	Xavier Walker.	ID:	8417
Name:	Oliver Thomas.	ID:	1395
Name:	Hannah Garcia.	ID:	2185
Name:	Ian Hernandez.	ID:	1729
Name:	Violet Taylor.	ID:	6073
Name:	David Johnson.	ID:	8491
Name:	Eva Rodriguez.	ID:	8543
Name:	Kevin Johnson.	ID:	4232
Name:	Quincy Garcia.	ID:	5993
Name:	Bob Hernandez.	ID:	2806
Name:	Hannah Thomas.	ID:	4368
Name:	Rachel Miller.	ID:	3791
Name:	Nora Gonzalez.	ID:	8604
Name:	Xavier Thomas.	ID:	9407
Name:	Pamela Garcia.	ID:	3249
Name:	Xavier Garcia.	ID:	6162

- d. If the user types 2, then ask user for an employee name (first, last, or both) and display ALL employees' information who have the same name. Otherwise, print not found as shown below.

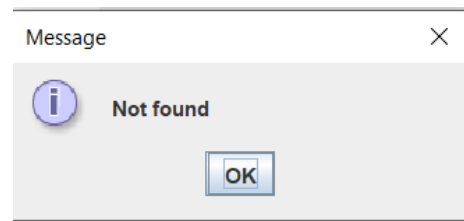
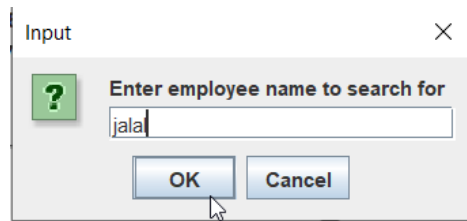
Input


Enter employee name to search for

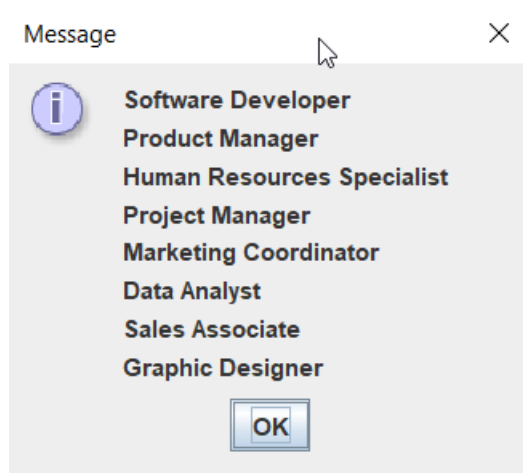
Message



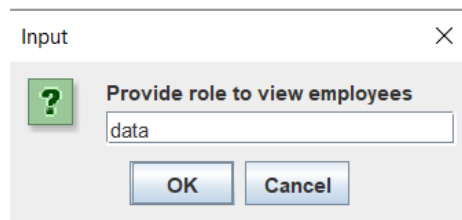
Oliver Martin,1976-06-23,Human Resources Specialist,2529,olivermartin@service.com,184313
Oliver Thomas,1966-03-11,Project Manager,1395,oliverthomas@service.com,212947
Oliver Thomas,1987-10-25,Marketing Coordinator,2970,oliverthomas@service.com,139442
Oliver Wilson,1965-06-15,Software Developer,9988,oliverwilson@service.com,104374
Oliver Walker,1984-03-11,Data Analyst,3949,oliverwalker@service.com,113829
Oliver Walker,1994-11-08,Product Manager,3584,oliverwalker@service.com,197504
Oliver Wilson,1985-11-01,Software Developer,6975,oliverwilson@service.com,88701
Oliver Harris,1964-12-21,Human Resources Specialist,4350,oliverharris@service.com,233374
Oliver Harris,1987-10-21,Software Developer,5877,oliverharris@service.com,86801
Oliver Miller,1976-01-26,Graphic Designer,8633,olivermiller@service.com,75354

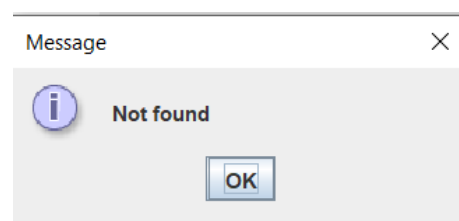
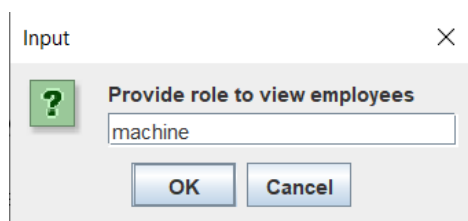
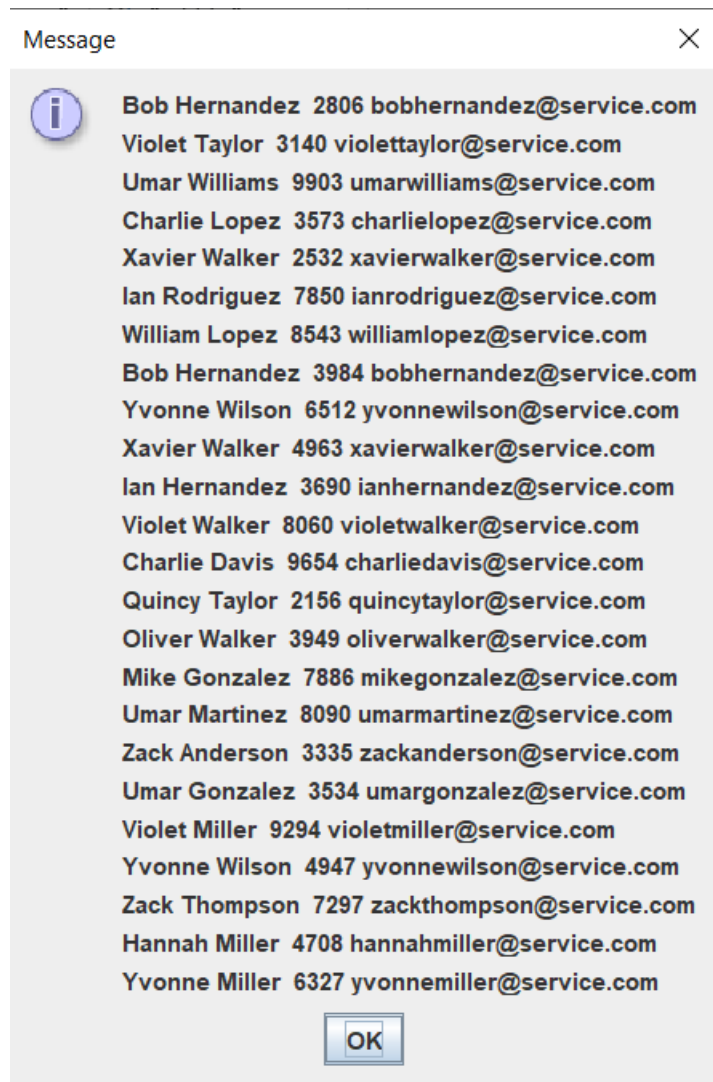


- e. If the user types 3, then you should call the method (already coded for you) that displays the roles as shown below:

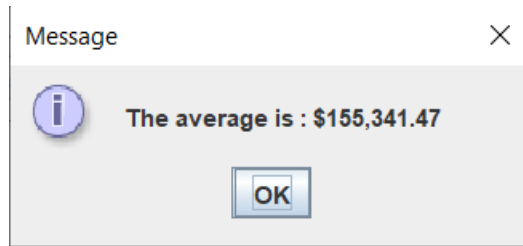


- f. If the user types 4, then you should view all employees in that role exactly in the format below. If the role does not exist, then display not found as shown below.





- g. If the user types 5, then display the average salary of all employees in the text file as shown below.



- h. If the user types 6, then display to the console the names, IDs, the bar representation of the salary, and whether the salary is above or below the average. And write that data to the text file given to you in line 29 of the main method.

Pamela Walker	6792	*****	false	
Pamela Walker	6792	*****	false	
Pamela Walker	6792	*****	false	
Oliver Martin	2529	*****		true
Oliver Martin	2529	*****		true
Oliver Martin	2529	*****		true
Xavier Walker	8417	*****		true
Xavier Walker	8417	*****		true
Xavier Walker	8417	*****		true
Oliver Thomas	1395	*****		true
Oliver Thomas	1395	*****		true
Oliver Thomas	1395	*****		true
Hannah Garcia	2185	*****	false	
Hannah Garcia	2185	*****	false	
Hannah Garcia	2185	*****	false	
Ian Hernandez	1729	*****		true
Ian Hernandez	1729	*****		true
Ian Hernandez	1729	*****		true
Violet Taylor	6073	*****		true