CENG 211

PROGRAMMING FUNDAMENTALS

HOMEWORK-1

Due Date: 30 October 2016, 23:55

A company has employees so that each employee has following features:

- name,
- age,
- type,
- number of hours worked,
- number of hours overtime worked,
- amount of sale,
- salary.

→ There are three different employee types: STAFF, PART_TIME, and INTERN. These types should be stored as an ENUM.

→ Salary of each employee is calculated according to **decision table** given in the below.

Decision Table for Salary Calculation

N = hours_worked, M = hours_overtime_worked

employee_type	Staff		Part-time		Intern	
hourly_wage	$35.00		$20.00		$5.00	
hourly_overtime_worked_age	$17.50		$10.00		$2.50	
amount_of_sale	< 50 units	>= 50 units	< 70 units	>= 70 units	<30 units	>=30 units
promotion	-	$100.00	-	$100.00	-	$10.00

Salary = N * hourly_wage + M * hourly_overtime_worked_wage + promotion

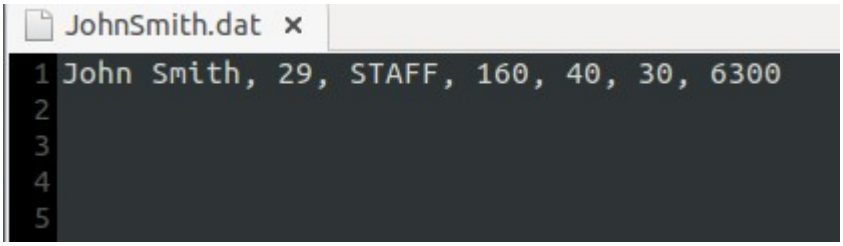
Your Java application for the company should do following operations:

1. **Adding an employee:** For this option, your application should ask name, age and type of the new employee to the user.

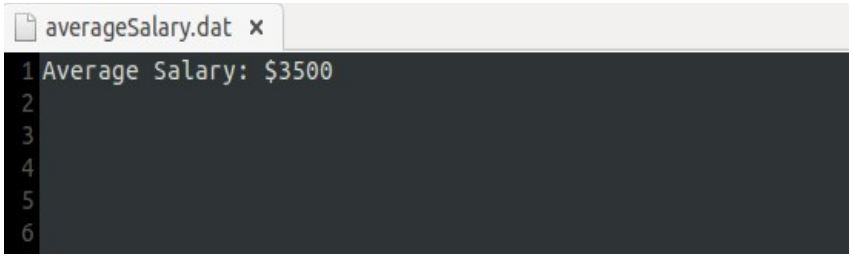
2. **Removing an employee:** For this option, your application should ask to the user name of the employee who quits job.

3. **Calculating salaries of the employees:** For this option, your application should list name of the each employee one by one and ask necessary information(number of hours worked, number of hours overtime worked , and amount of sale) to the user and print salary of the employee to the screen.

4. **Saving employee information into the file:** For this option, your application should create a file named as **"employeeName.dat"** for each employee and save the employee information in a format(name, age, type, number of hours worked, number of hours overtime worked, amount of sale, salary) as shown in the following figure:

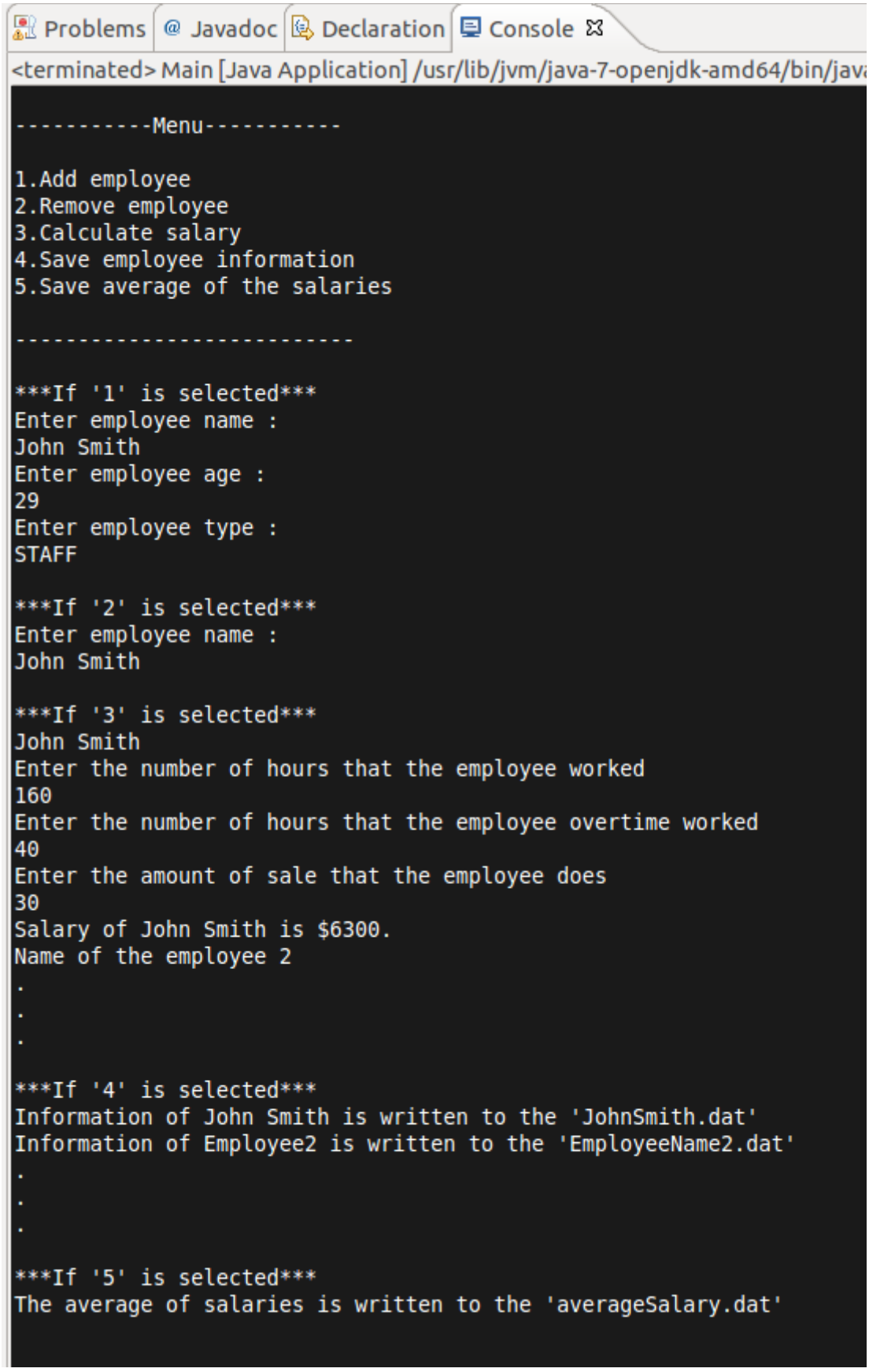


5. **Calculating average salary and save it into the text file:** For this option, your application should **read** each "employeeName.dat" file, calculate the average salary and then **write** it to the file named as **"averageSalary.dat"**, as shown in the below:



Firstly, your application should read the file named as "employeeInfo.dir". In this file, there are employees with their features and you should create an Employee object from each of the employees.

Then, you should create a menu on the console so that it should have a choice for each of the operations explained in the above which is shown in the following figure:



NOTES:

- You should check validity of user inputs.
- You should use **StringTokenizer** while you read the file.
- The type of the employee should be stored as an **ENUM**.
- Company should keep Employee objects as an **ArrayList**.
- You should have three different Java classes:
  - Employee.java
  - Company.java
  - CompanyApp.java

SUBMISSION RULES:

- You should create your Java project as **ID1_ID2_HW1** and export as **ID1_ID2_HW1.zip**
- You should upload your zip file **ID1_ID2_HW1.zip** to the CMS.
- One of the group members is sufficient to upload homework to the CMS.
- You should add an author comment to the top of each class that you implement as it is shown in the following figure: