

Hacettepe University

Computer Science and Engineering Department

Name and Surname : Bahadır ADAK
Identity Number : 21526619
Course : BBM104 - Introduction to Programming Lab II
Experiment : Programming Assignment II
Subject : Inheritance
Data Due : 23.03.2016
Advisors : Assist. Prof. Dr. Ayça TARHAN, R. A. Nebi YILMAZ
e-mail : b21526619@hacettepe.edu.tr
Main Program : JAVA

1. Software Catalogue Information Page

2. Software Using Documentation

2.1 Software Usage

2.3 ErrorMessage

3. Software Design Notes

3.1 Description of the Program

3.1.1 Problem

3.1.2 Solution

3.2 Algorithm

3.3 Special Design Properties

4. Software Testing Notes

4.1 Bugs and Software Reliability

4.2 Comments

5. References

2. Software Using Documentantation

2.1 Software Usage

First of all need to read two text files(Personnel.txt and Monitoring.txt) and register the inputs after that allocate jobs to the class because every job's payroll calculations different from each others . In each class i calculate the specific operations for that class. For example Manager has severence pay but Parttime employee has not severence pay. After i do that finally i write them to text file which text files name include their registration number.

2.2 ErrorMessage

In my code used two try-catch block. If they are any arguments it said "It needs two arguments for running" . We can fix that define two arguments. Go Run Configurations after write Personnel.txt and Monitoring.txt in Program arguments part. But project's src folder must contain these text file and include payroll information.

In Read class

```
<ErrorNumber 1> : <IOException>  
<In 73. line>      <Input file does not exist>  
                   <Back to the code and define arguments>
```

```
<ErrorNumber 2> : <IOException>  
<In 91. line>      < Input file does not exist >  
                   < Back to the code and define arguments>
```

3. Software Design Notes

3.1 Description of the Program

3.1.1 Problem

In this assignment I have to develop a program to monitorize payroll of Personnel who is working in a government institution. When program was running uses two input text files.

3.1.2 Solution

First of all we take arguments which are Personnel.txt and Monitoring.txt then read them. They are our inputs. After that eliminate the inputs according to jobs and use inheritance according to hierarchy. Following that I define methods that include how to calculate every jobs payroll. Some methods use more than one job some methods use only one job also some of them share same method to others but needs to change variable and I call them override. Finally I collect and write all of them by individual names.

Its advantage is find correct output but if baseSalary change after x years we have to change base salary instead of that some variable may be take with using scanner . I think this is disadvantage of that solution.

3.2 Algorithm

1. Make initialisation
 - 1.1 Open Personnel.txt and Monitoring.txt and read them.
 - 1.2 Create two list which name PersonnelInfo and MonitoringInfo.
 - 1.3 Personnel to PersonnelInfo send , Monitoring to MonitoringInfo send.
2. Create superclass which name Personnel
 - 2.1 Define methods that including payroll calculations.
 - 2.2 Define a method that include writing text file.
 - 2.3 Create subclass, their name Manager, Officer, Chief etc. (Inheritance)
 - 2.3.1 In each subclass if you need change superclass's method or define new specific method for calculation.(Override)
3. Create text file for each personnel
 - 3.1 Write their information and their payroll , text names should be their registration number.
 - 3.2 Close text files.

3.3 Special Design Properties

I can not think other solution with details but it can be write using arraylist may be write with using more less class. It can be written without adherence to hierarchy.

4. Software TestingNotes

4.1 Bugs and Software Reliability

There is no bug in my code. May be if one personel have two name second name can be surname but i can handle it and now if a personel has two name in name section when writing two name direct and surname printing them seperately. I saw BOM char problem but i handled it with use (name.replace("İ»İ", "")) way. First element of Personnel.txt is Erdem Yılmaz but when the compiler read it looked like İErdem Yılmaz. I have to remove İ char and i used replace .

4.2 Comments

I think this project not flexible for example security must work 6 day in a week but may be he or she get sick and cant go work one day so we calculate payroll by six days or five days it is not clear. Another confusing point is what if two people have the same name how the program will devide them.

5. References

1. <http://stackoverflow.com/>
2. <https://en.wikipedia.org/wiki/Javadoc>
3. <http://beginnersbook.com/>
4. <http://www.tutorialspoint.com/>
5. <http://www.java2s.com/>