

Hacettepe University: Computer Science and Engineering Department

Name and Surname: Mert Tazeoğlu

Identity Number: 21946606

Course: BBM104

Experiment: University Personel Payment System By Java

Subject: Inheritance OOP Concept

Data Due: 30.04.2020 – (23:59)

Advisors: Nebi Yılmaz – Bahar Gezici

E-Mail: b21946606@cs.hacettepe.edu.tr

Main Program: HU_CENG Submit System > b21946606 > Main.Txt

2. Software Using Documentation

2.1 Software Usage: Our program needs two input files for working. One of them includes personnel's general information and the other one includes information of working hours. With by using these two input files, our program will create .txt files for every one of personnel. In these txt files, you can find name/surname, registration number, position, year of start and total salary informations.

2.2 Provided Possibilities: Our program has special try except messages for developing extra user experience (UX) and preventing users not knowing what to do.

2.3 Error Messages:

Error-1: "An Error Occured While Reading File! Please Try Again!"

Error-2: "An Error Occured While Writing Output File Called: " + fileName + ".txt"

- First error is about of reading input files and second is about writing output files. For handling both of situations, you must be sure that format of input files are correct.

3. Software Design Notes

3.1 Description Of Program

3.1.1 Problem: We need to program a payment system for university personnels. But this program must be with less complexity and more code reuse.

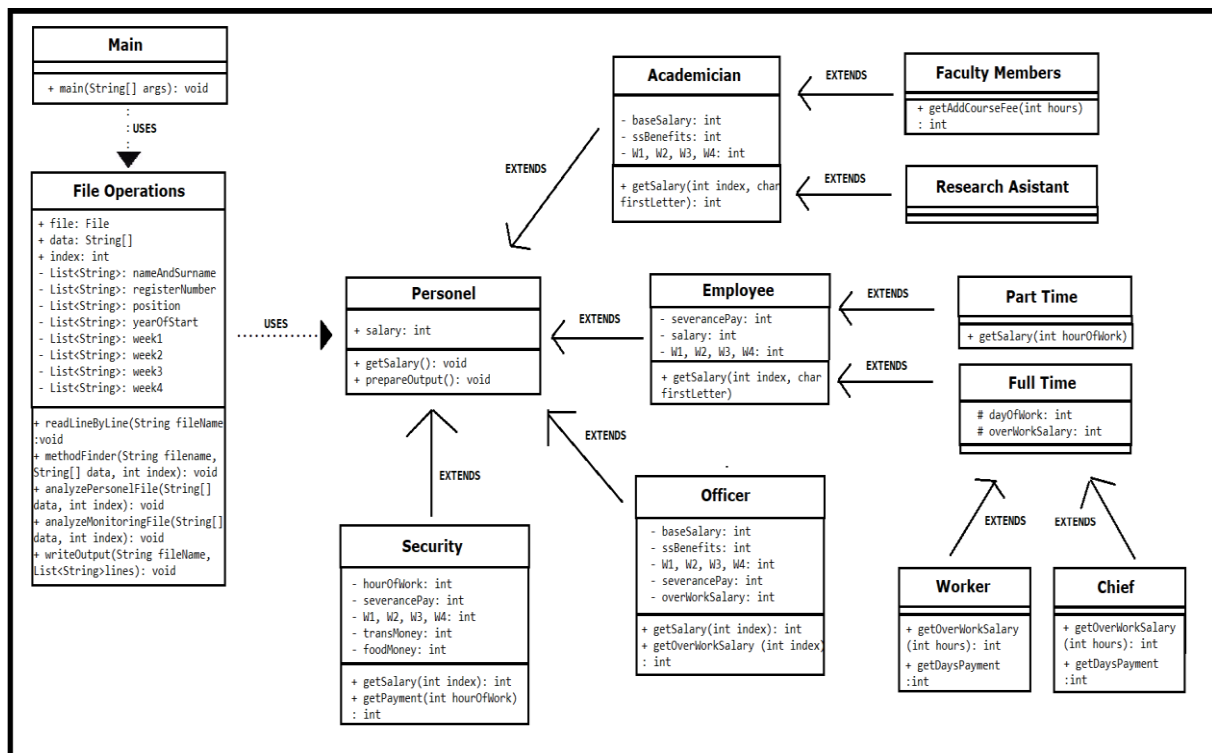
3.1.2 Solution: For that we will use inheritance, relationships among classes by using object references and control of multiple instances of classes.

3.2 Algorithm:

1. For two input files read file line by line and copy it in a string array.
2. For every item (line) in the string array:
 - 2.1. Split array with delimiter of "\t".
 - 2.2. For every splitted item in every line:
 - 2.2.1. If file is personnel file add first item to `nameAndSurname`.
 - 2.2.2. If file is personnel file add second item to `registerNumber` else if file is monitoring file add first item to `week1` arraylist.
 - 2.2.3. If file is personnel file add third item to `position` else if file is monitoring file add first item to `week2` arraylist.
 - 2.2.4. If file is personnel file add fourth item to `yearOfStart` else if file is monitoring file add first item to `week3` arraylist.
 - 2.2.5. If file is monitoring file add fifth item to `nameAndSurname` arraylist.
 - 2.2.6. Call function of writeOutput. (Which is 3rd step in algorithm)
3. For every personnel in `registerNumber` arraylist:
 - 3.1. Create file with named of registerNumber ID.
 - 3.2. Add file to personnels names and surnames, registration numbers, positions, years of starts and total salary informations with by using arraylists in step 2.
4. Close files.

3.3 Special Design Properties: I dont have any new original approaches about problem.

4. Class Diagram (UML Diagram)



For Big Photo: <https://www.technogezgin.com/wp-content/uploads/2020/04/%C5%9Eema-1-1024x513.png>

5. Software Testing Notes

5.1 Bugs And Software Reliability: No bugs found yet. Also our program coded as easily extendable and easily upgradeable. (High flexibility and high efficiency)

6. References

<Problem Definition Reference>

By BBM 104 Team

BBM104_PA2.pdf

Published On Piazza Platform

Published On 11.04.2020

<Format Of Report Reference>

By Hacettepe University Computer Science & Engineering Team

<ftp://ftp.cs.hacettepe.edu.tr/pub/dersler/genel/FormatForLabReports.doc>

Published On Piazza Platform

Published On 11.04.2020