



Hacettepe University

BBM104-Assignment 2 Report

Mustafa KOLLU-21627485

Computer Engineering

Report

1) Problem Definition

Our problem in this assignment is find people with registration number who are academicians, officers, employees and securities and calculate their fee.

2) Algorithms


a) In Main Class : I just run my program in Program class and take arguments.







```
public static void main(String[] args) {  
    String argument1 = args[0];           //take argument 0  
    String argument2 = args[1];           //take argument 1  
    Program program = new Program();       //create object in Program class  
    program.programWork(argument1, argument2); //run programWork in Program class  
}
```

b) In Program Class : Create arraylist and read txt files

```
ArrayList<Monitoring> array_monitoring= new ArrayList<>();  
ArrayList<Personnel> array_personnel= new ArrayList<>();  
  
Monitoring.readFile(arguman2, array_monitoring, 0);  
Personnel.readFile(arguman1, array_personnel);
```

c) In Program Class : All my program

 Program

-  programWork(String, String) : void
-  show(String, String, String, String, int, int) : void
-  calculateEmployee(String, int, int, int, int, int, int) : int
-  calculateSecurity(String, int, int, int, int, int, int) : int
-  calculateAcademician(String, int, int, int, int, int, int) : int
-  calculateOfficer(String, int, int, int, int, int, int) : int

programWork run my all function

```

if(personnell.getPositionOfPersonnel().equals("SECURITY")) {    //this if condition for check to equals personnell's
    int j=0;
    for(Monitoring m1:array_monitoring) {        //this for loop for access Monitoring class's element
        if(j==0&&personnell.getRegistrationNumber().equals(m1.getRegistrationNumber())){//this if condition for chec
            {
                int l=calculateSecurity(personnell.getPositionOfPersonnel(),m1.getWeek1(),m1.getWeek2(),m1.getWeek3(
                //this run calculate fee function
                Security security = new Security(personnell.getName(),personnell.getSurname(),personnell.getRegistra
                //this equalize Security's class constructor
                j++;
                show(personnell.getName(),personnell.getSurname(),personnell.getRegistrationNumber(),personnell.getP
                //this run print function for security
            }
        }
    }
}

```

Contain Show Function

```

public void show(String name,String surname,String registrationNumber,String position,int year,int salary) {
    //this print output and write registration number.txt
    try {
        File myObj = new File(registrationNumber+".txt");//create new output file txt format
        if (myObj.createNewFile()) {
        }
    } catch (IOException e) {
        System.out.println("An error occurred.");
        e.printStackTrace();
    }

    try {
        FileWriter myWriter = new FileWriter(registrationNumber+".txt");
        myWriter.write("Name : "+name+"\n");
        myWriter.write("Surname : "+surname+"\n");
        myWriter.write("Registration Number : "+registrationNumber+"\n");
        myWriter.write("Position : "+position+"\n");
        myWriter.write("Year of Start : "+year+"\n");
        myWriter.write("Total Salary : "+salary+".00 TL");
        myWriter.close();
    } catch (IOException e) {
        System.out.println("An error occurred.");
        e.printStackTrace();
    }
}

```

Calculate our personnell's fee like

```

public int calculateEmployee(String position,int week1,int week2,int week3,int week4,int year,int totalFee) {
    //this calculate Employee's fee function
}

```

d) In monitoring class and personnell class : they have just read function and hold the elements

```

public class Monitoring {
    private String registrationNumber;
    private int week1;
    private int week2;
    private int week3;
    private int week4;

    private String name;
    private String surname;
    private String registrationNumber;
    private String positionOfPersonnel;
    private int yearOfStart;
    private int totalSalary;

    public static String[] readFile(String path, ArrayList<Personnel> array_personnel){
        try{
            //this function read personnell list
            int i=0;
            int length= Files.readAllLines(Paths.get(path)).size();
            String[] results=new String[length];
            for (String line: Files.readAllLines(Paths.get(path))){

                String[] arr1=line.split("\t");
                String[] arr2=arr1[0].split(" ");
                array_personnel.add(new Personnel(arr2[0],arr2[1],arr1[1],arr1[2],Integer.parseInt(arr1[3])));

            }

            return results;
        }
        catch (IOException e){
            e.printStackTrace();
            return null;
        }
    }
}

```

This is my uml diagram

