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package A3;

import java.util.Scanner;

/**
 *
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 */

class Person{
    private int aadhaar;
    private String name, address;
    private char gender;

    public Person(int aadhaar, String name, String address, char
gender)
    {
        this.aadhaar=aadhaar;
        this.name=name;
        this.address=address;
        this.gender=gender;
    }

    public String getName(){
        return name;
    }

    public String getAddress(){
        return address;
    }

    public void setAddress(String address){
        this.address=address;
    }

    public char getGender(){
        return gender;
    }
}

class Student extends Person{
    private String program;
    private int year;
    private float totalmark;

    public Student(int aadhaar, String name, String address, char
gender, String program, int year, float total){
        super(aadhaar, name, address, gender);
        this.program=program;
        this.year=year;
        totalmark=total;
    }

    public String getProgram(){

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        return program;
    }

    public int getYear(){
        return year;
    }

    public void setYear(int year){
        this.year=year;
    }

    public float getTotal(){
        return totalmark;
    }

    public void setTotal(float tot){
        totalmark=tot;
    }

    public float calGPA(){
        return totalmark/10;
    }
}

class Faculty extends Person{
    private String designation, department;
    private float basicpay;

    public Faculty(int aadhaar, String name, String address, char
gender, String designation, String dept, float pay){
        super(aadhaar, name, address, gender);
        this.designation=designation;
        department=dept;
        basicpay=pay;
    }

    public String getDesig(){
        return designation;
    }

    public void setDesig(String desig){
        designation=desig;
    }

    public void setBasic(float basic){
        basicpay=basic;
    }

    public float getBasic(){
        return basicpay;
    }

    public float calSalary(){
        return (float) (basicpay+.6*basicpay+.1*basicpay-
(.085*basicpay+.08*basicpay));
    }
}

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}

public class TestInheritance {
    public static void main(String[] args) {
        int choice=1;
        Scanner in=new Scanner(System.in);
        int aadhaar, year;
        String name, address, program, designation, department;
        char gender;
        float totalmark, basicpay;

        System.out.println("\tSTUDENT RECORD");
        System.out.println("*****");
        System.out.println("Enter Student Details: ");
        System.out.println("\tAadhaar No: ");
        aadhaar=in.nextInt();
        System.out.println("\tName: ");
        in.nextLine();
        name=in.nextLine();
        System.out.println("\tAddress: ");
        address=in.nextLine();
        System.out.println("\tGender: ");
        gender=in.next().charAt(0);
        System.out.println("\tProgram: ");
        in.nextLine();
        program=in.nextLine();
        System.out.println("\tYear: ");
        year=in.nextInt();
        System.out.println("\tTotal: ");
        totalmark=in.nextFloat();

        Student s=new Student(aadhaar, name, address, gender,
program, year, totalmark);

        System.out.println("Choice:\n\t1. Get Student Detail\n\t2.
Set Student Detail\n\t0. Exit\nEnter Choice: ");
        choice=in.nextInt();

        while(choice!=0)
        {
            switch(choice){
                case 1:
                    System.out.println("\t\tSTUDENT DETAILS");
                    System.out.println("Name      :
"+s.getName());
                    System.out.println("Address  :
"+s.getAddress());
                    System.out.println("Gender   :
"+s.getGender());
                    System.out.println("Program  :
"+s.getProgram());
                    System.out.println("Year     :
"+s.getYear());
                    System.out.println("Total    :
"+s.getTotal());

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        System.out.println("GPA      : "+s.calGPA());
        break;
    case 2:
        System.out.println("Enter Student address:
");
        in.nextLine();
        address=in.nextLine();
        s.setAddress(address);
        System.out.println("Enter year      :
");
        year=in.nextInt();
        s.setYear(year);
        System.out.println("Enter Student total :
");
        totalmark=in.nextFloat();
        s.setTotal(totalmark);
        break;
    default: System.out.println("Enter valid choice!!");
}
System.out.println("Choice:\n\t1. Get Student
Detail\n\t2. Set Student Detail\n\t0. Exit\nEnter Choice: ");
choice=in.nextInt();
}

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System.out.println("\tFACULTY RECORD");
System.out.println("*****");
System.out.println("Enter Faculty Details: ");
System.out.println("\tAadhaar No: ");
aadhaar=in.nextInt();
System.out.println("\tName: ");
in.nextLine();
name=in.nextLine();
System.out.println("\tAddress: ");
address=in.nextLine();
System.out.println("\tGender: ");
gender=in.next().charAt(0);
System.out.println("\tDesignation: ");
in.nextLine();
designation=in.nextLine();
System.out.println("\tDepartment: ");
department=in.nextLine();
System.out.println("\tBasic Pay: ");
basicpay=in.nextFloat();

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Faculty f=new Faculty(aadhaar, name, address, gender,
designation, department, basicpay);

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System.out.println("Choice:\n\t1. Get Faculty Detail\n\t2.
Set Faculty Detail\n\t0. Exit\nEnter Choice: ");
choice=in.nextInt();

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while(choice!=0)
{
    switch(choice) {

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        case 1:
            System.out.println("\t\tFACULTY DETAILS");
            System.out.println("Name          :
"+f.getName());
            System.out.println("Address       :
"+f.getAddress());
            System.out.println("Gender        :
"+f.getGender());
            System.out.println("Designation   :
"+f.getDesig());
            System.out.println("Basic Pay     :
"+f.getBasic());
            System.out.println("Salary        :
"+f.calSalary());
            break;
        case 2:
            System.out.println("Enter Faculty address:
");
            in.nextLine();
            address=in.nextLine();
            f.setAddress(address);
            System.out.println("Enter Designation      :
");
            designation=in.nextLine();
            f.setDesig(designation);
            System.out.println("Enter Basic Pay        :
");
            basicpay=in.nextFloat();
            f.setBasic(basicpay);
            break;
        default: System.out.println("Enter valid choice!!");
    }
    System.out.println("Choice:\n\t1. Get Faculty
Detail\n\t2. Set Faculty Detail\n\t0. Exit\nEnter Choice: ");
    choice=in.nextInt();
}

}

}

```