


```
public abstract class Employee {
    private String firstName;
    private String lastName;
    private String SSN;

    public Employee (String first, String last, String ssn) {
        firstName = first;
        lastName = last;
        SSN = ssn;
    }

    public String getFirstName(){
        return firstName;
    }

    public void setFirstName (String first) {
        firstName = first;
    }

    public String getLastName(){
        return lastName;
    }

    public void setLastName (String last) {
        lastName = last;
    }

    public String getSSN(){
        return SSN;
    }

    public void setSSN(String number){
        SSN = number;
    }

    public String toString(){
        return getFirstName() + " " + getLastName() + "\nSSN: " +
getSSN();
    }

    public abstract double earnings();
}
```

```
public class SalariedEmployee extends Employee {
    private double weeklySalary;

    public SalariedEmployee (String first, String last, String ssn,
double salary){
        super (first, last, ssn);
        setWeeklySalary(salary);
    }

    public double getWeeklySalary(){
        return weeklySalary;
    }

    public void setWeeklySalary(double salary){
        weeklySalary = salary < 0.0 ? 0.0 : salary;
    }

    public double earnings(){
        return weeklySalary;
    }

    public String toString(){
        return "\nsalaried employee: " + super.toString() + "\nearnings: $"
+ earnings();
    }
}
```

```
public class HourlyEmployee extends Employee {
    private double wage;
    private double hours;

    public HourlyEmployee (String first, String last, String SSN, double
hourlyWage, double hoursWorked) {
        super (first, last, SSN);
        setWage (hourlyWage);
        setHours (hoursWorked);
    }

    public void setWage (double wageAmount) {
        wage = wageAmount < 0.0 ? 0.0 : wageAmount;
    }

    public double getWage(){
        return wage;
    }

    public void setHours (double hoursWorked){
        hours = (hoursWorked >= 0.0 && hoursWorked <= 168.0) ?
hoursWorked : 0.0;
    }

    public double getHours(){
        return hours;
    }

    public double earnings(){
        if (hours <= 40)
            return wage * hours;
        else
            return 40 * wage + (hours - 40) * wage * 1.5;
    }

    public String toString(){
        return "\nhourly employee: " + super.toString() + "\nearned: $ "
+ earnings();
    }
}
```

```
public class CommissionEmployee extends Employee{
    private double grossSales;
    private double commissionRate;

    public CommissionEmployee (String first, String last, String SSN,
double grossWeeklySales, double percent){
        super (first, last, SSN);
        setGrossSales (grossWeeklySales);
        setCommissionRate (percent);
    }

    public double getGrossSales(){
        return grossSales;
    }

    public void setGrossSales (double sales){
        grossSales = sales < 0.0 ? 0.0 : sales;
    }

    public double getCommissionRate(){
        return commissionRate;
    }

    public void setCommissionRate (double rate){
        commissionRate = (rate > 0.0 && rate < 1.0) ? rate : 0.0;
    }

    public double earnings(){
        return getCommissionRate() * getGrossSales();
    }

    public String toString(){
        return "\ncommission empolyee: " + super.toString() + "\nearned:
$ " + earnings();
    }
}
```

```
public class BasePlusCommissionEmployee extends CommissionEmployee {
    private double baseSalary;

    public BasePlusCommissionEmployee (String first, String last, String
SSN, double grossSalesAmount, double rate, double baseSalaryAmount){
        super (first, last, SSN, grossSalesAmount, rate);
        setBaseSalary (baseSalaryAmount);
    }

    public void setBaseSalary (double salary){
        baseSalary = salary < 0.0 ? 0.0 : salary;
    }

    public double getBaseSalary(){
        return baseSalary;
    }

    public double earnings(){
        return getBaseSalary() + super.earnings();
    }

    public String toString(){
        return "\nbase-salaried commission employee: " +
super.getFirstName() +
        " " + super.getLastName() + "\nsocial security number: " +
super.getSSN() + "\nearned: $" + earnings();
    }
}
```