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# Payroll Management

## Java Programming Digital Assignment - I

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### 1) Payable.java

```
package packs;

public interface Payable
{
    double earnings();
    double earnings(double a);
}
```

### 2) Employee.java

```
package packs;

public abstract class Employee implements Payable
{
    String firstname,lastname;
    long ssn;
    public Employee(String fn, String ln, long ss)
    {
        this.firstname = fn;
        this.lastname = ln;
        this.ssn = ss;
    }
    public abstract double earnings();
}
```

---

### 3) SalariedEmployee.java

```
package packs;
```

```
public class SalariedEmployee extends Employee
{
    double weeklysal;
    public SalariedEmployee(String fn, String ln, long ss, double weekly)
    {
        super(fn, ln, ss);
        this.weeklysal = weekly;
    }
    public double earnings()
    {
        return(this.weeklysal);
    }
    public double earnings(double bonus)
    {
        return(this.earnings() + bonus);
    }
}
```

### 4) HourlyEmployee.java

```
package packs;
```

```
public class HourlyEmployee extends Employee
{
    double wage;
    int hours;
    public HourlyEmployee(String fn, String ln, long ss, double wage, int h)
    {
        super(fn, ln, ss);
        this.wage = wage;
        this.hours = h;
    }
    public double earnings()
    {
        double totalsal;
        if(hours<=40)
        {
            totalsal = wage * hours;
        }
        else
```

---

```
    {
        totalsal = (wage * 40) + (wage * 1.5 * (hours - 40));
    }
    return(totsal);
}
public double earnings(double bonus)
{
    return(this.earnings() + bonus);
}
}
```

## 5) CommissionEmployee.java

```
package packs;

public class CommissionEmployee extends Employee
{
    double grossSale, commissionRate;
    public CommissionEmployee(String fn, String ln, long ss, double gross, double
commission)
    {
        super(fn, ln, ss);
        this.grossSale = gross;
        this.commissionRate = commission;
    }
    public double earnings()
    {
        return(this.grossSale * this.commissionRate);
    }
    public double earnings(double bonus)
    {
        return(this.earnings() + bonus);
    }
}
```

## 6) BasePlusCommissionEmployee.java

```
package packs;

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

---

```
public BasePlusCommissionEmployee(String fn, String ln, long ss, double gross, double
commission, double base)
{
    super(fn, ln, ss, gross, commission);
    this.baseSalary = base;
}
public double earnings()
{
    return((this.grossSale * this.commissionRate) + baseSalary);
}
public double earnings(double bonus)
{
    return(this.earnings() + bonus);
}
}
```

## 7) Payroll.java

```
import packs.*;
import java.util.*;

class Payroll
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        Payroll pay = new Payroll();

        System.out.println("Categories of Employees : ");
        System.out.println("1) Salaried Employee.");
        System.out.println("2) Commission Employee.");
        System.out.println("3) Base Plus Commission Employee.");
        System.out.println("4) Hourly Employee.");
        System.out.println("Enter your choice : ");
        int cho = sc.nextInt();

        double totalEarnings;

        System.out.println("Enter the First name of the employee : ");
        final String fname = sc.next();
        System.out.println("Enter the Last name of the employee : ");
        final String lname = sc.next();
        System.out.println("Enter the Social Security number of the employee : ");
```

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```
final long ssn = sc.nextLong();

System.out.println("Enter yes or no to state if the employee has recieved bonus : ");
String bcho = sc.next();
Boolean bonus;
double bonus_amt = 0;
if(bcho.equalsIgnoreCase("yes") || bcho.equalsIgnoreCase("y"))
{
    bonus = true;
    System.out.println("Enter the bonus amount recieved : ");
    bonus_amt = sc.nextDouble();
}
else
{
    bonus = false;
}

if(cho==1)
{
    System.out.println("Enter the Weekly Salary of the employee : ");
    double weekly = sc.nextDouble();
    SalariedEmployee ob = new SalariedEmployee(fname, lname, ssn, weekly);
    if(bonus)
    {
        totalEarnings = ob.earnings(bonus_amt);
    }
    else
    {
        totalEarnings = ob.earnings();
    }
    pay.printDetails(fname, lname, ssn, totalEarnings);
}
else if(cho==2)
{
    System.out.println("Enter the Gross sales of the employee : ");
    double gsale = sc.nextDouble();
    System.out.println("Enter the Commission rate of the employee : ");
    double crate = sc.nextDouble();
    Payable ob = new CommissionEmployee(fname, lname, ssn, gsale, crate);
    if(bonus)
    {
        totalEarnings = ob.earnings(bonus_amt);
    }
    else
```

---

```

        {
            totalEarnings = ob.earnings();
        }
        pay.printDetails(fname, lname, ssn, totalEarnings);
    }
    else if(cho==3)
    {
        System.out.println("Enter the Gross sales of the employee : ");
        double gsale = sc.nextDouble();
        System.out.println("Enter the Basic Salary of the employee : ");
        double basic = sc.nextDouble();
        System.out.println("Enter the Commission rate of the employee : ");
        double crate = sc.nextDouble();
        Payable ob = new BasePlusCommissionEmployee(fname, lname, ssn, gsale, crate,
basic);
        if(bonus)
        {
            totalEarnings = ob.earnings(bonus_amt);
        }
        else
        {
            totalEarnings = ob.earnings();
        }
        pay.printDetails(fname, lname, ssn, totalEarnings);
    }
    else if(cho==4)
    {
        System.out.println("Enter the Hourly Wage of the employee : ");
        double hwage = sc.nextDouble();
        System.out.println("Enter the total working hours of the employee : ");
        int hour = sc.nextInt();
        Payable ob = new HourlyEmployee(fname, lname, ssn, hwage, hour);
        if(bonus)
        {
            totalEarnings = ob.earnings(bonus_amt);
        }
        else
        {
            totalEarnings = ob.earnings();
        }
        pay.printDetails(fname, lname, ssn, totalEarnings);
    }
    else
    {

```

```

        System.out.println("Wrong Input");
    }
    sc.close();
}

void printDetails(String fname, String lname, long ssn, double totalEarnings)
{
    System.out.println("-----");
    System.out.println("Employee Name : " + fname + " " + lname);
    System.out.println("Social Security Number : " + ssn);
    System.out.println("Total Salary = " + totalEarnings);
    System.out.println("-----");
}
}

```

## 8) Output

```

(base) Aadhityas-MacBook-Air:JP aadhitya$ cd da1
(base) Aadhityas-MacBook-Air:da1 aadhitya$ javac packs/*.java
(base) Aadhityas-MacBook-Air:da1 aadhitya$ javac Payroll.java
(base) Aadhityas-MacBook-Air:da1 aadhitya$ java Payroll
Categories of Employees :
1) Salaried Employee.
2) Commission Employee.
3) Base Plus Commission Employee.
4) Hourly Employee.
Enter your choice :
2
Enter the First name of the employee :
Harsha
Enter the Last name of the employee :
V
Enter the Social Security number of the employee :
23411345
Enter yes or no to state if the employee has recieved bonus :
yes
Enter the bonus amount recieved :
2000
Enter the Gross sales of the employee :
12000
Enter the Commission rate of the employee :
9

-----
Employee Name : Harsha V
Social Security Number : 23411345
Total Salary = 110000.0
-----
(base) Aadhityas-MacBook-Air:da1 aadhitya$ 

```

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## 9) Folder Organisation



A screenshot of a file explorer window showing the folder structure for a project named 'da1'. The 'da1' folder is expanded, revealing a sub-folder named 'packs'. The 'packs' folder is also expanded, showing a list of files. Each file is preceded by a red circular icon containing a white letter 'J'. The files are: BasePlusCommissionEmployee.class, BasePlusCommissionEmployee.java, CommissionEmployee.class, CommissionEmployee.java, Employee.class, Employee.java, HourlyEmployee.class, HourlyEmployee.java, Payable.class, Payable.java, SalariedEmployee.class, SalariedEmployee.java, Payroll.class, and Payroll.java.

```
▼ da1
  ▼ packs
    J BasePlusCommissionEmployee.class
    J BasePlusCommissionEmployee.java
    J CommissionEmployee.class
    J CommissionEmployee.java
    J Employee.class
    J Employee.java
    J HourlyEmployee.class
    J HourlyEmployee.java
    J Payable.class
    J Payable.java
    J SalariedEmployee.class
    J SalariedEmployee.java
    J Payroll.class
    J Payroll.java
```