```
package com.mycompany.assignment3;

public abstract class Employee {

    private String firstName;
    private String lastName;
    private String SSN;
    private Date birthDate;

    public Employee(String firstName, String lastName,
            String SSN, Date birthDate) {
        this.firstName = firstName;
        this.lastName = lastName;
        this.SSN = SSN;
        this.birthDate = birthDate;
    }

    public Date getBirthDate(){
        return birthDate;
    }

    @Override
    public String toString() {
        return "Employee{" + "FirstName= " + firstName +
                ", LastName= " + lastName + ", SocialSecurityNumber= " + SSN + "}";
    }

    public abstract double earnings();

}
```

```
package com.mycompany.assignment3;

public class Date {

    private int day;
    private int month;
    private int year;

    public Date(int day, int month, int year) {
        this.day = day;
        this.month = month;
        this.year = year;
    }

    public int getDay() {
        return day;
    }

    public int getMonth() {
        return month;
    }

    public int getYear() {
        return year;
    }

}
```

```java
package com.mycompany.assignment3;

public class HourlyEmployee extends Employee {

    private int wage;
    private int hours;

    public HourlyEmployee(int wage, int hours,
            String firstName, String lastName, String SSN, Date birthDate) {
        super(firstName, lastName, SSN, birthDate);
        this.wage = wage;
        this.hours = hours;
    }

    @Override
    public String toString() {
        return "HourlyEmployee{" + "Hourly Wage=" + wage +
                ", Hours Worked=" + hours + '}'+super.toString();
    }

    @Override
    public double earnings() {
        double earning = 0;
        if (hours <= 40) {
            earning = wage * hours;
        } else if (hours > 40) {
            earning = (40 * wage) + (hours - 40) * wage * 1.5;
        }
        return earning;
    }
}
```

```java
package com.mycompany.assignment3;

public class SalariedEmployee extends Employee {
    private int weeklySalary;

    public SalariedEmployee(int weeklySalary, String firstName,
            String lastName, String SSN, Date birthDate) {
        super(firstName, lastName, SSN, birthDate);
        this.weeklySalary = weeklySalary;
    }

    @Override
    public String toString() {
        return "SalariedEmployee{" + "WeeklySalary=" + weeklySalary +
                '}'+super.toString();
    }

    @Override
    public double earnings() {
        //Added 10% due to given condition.
        return weeklySalary+ ((weeklySalary*10)/100);
    }

}
```

```java
package com.mycompany.assignment3;

public class CommissionEmployee extends Employee {

    int commissionRate;
    int grossSales;

    public CommissionEmployee(int commissionRate, int grossSales,
            String firstName, String lastName, String SSN, Date birthDate) {
        super(firstName, lastName, SSN, birthDate);
        this.commissionRate = commissionRate;
        this.grossSales = grossSales;
    }

    @Override
    public String toString() {
        return "CommissionEmployee{" + "commissionRate=" + commissionRate +
                ", grossSales=" + grossSales + '}'+super.toString();
    }

    @Override
    public double earnings() {
       //Added 10% due to given condition
        return (commissionRate * grossSales)+(((commissionRate * grossSales)*10)/100);
    }
}
```

```java
package com.mycompany.assignment3;

public class BasePlusCommissionEmployee extends CommissionEmployee {

    private int baseSalary;

    public BasePlusCommissionEmployee(int commissionRate, int grossSales,
            int baseSalary, String firstName,
            String lastName, String SSN, Date birthDate) {
        super(commissionRate,grossSales, firstName, lastName, SSN, birthDate);
        this.baseSalary = baseSalary;
    }

    @Override
    public String toString() {
        return "BasePlusCommissionEmployee{" + "Base Salary= "+
                baseSalary + '}' + super.toString();
    }

    @Override
    public double earnings() {
        return super.commissionRate+ super.grossSales + baseSalary;
    }
}
```

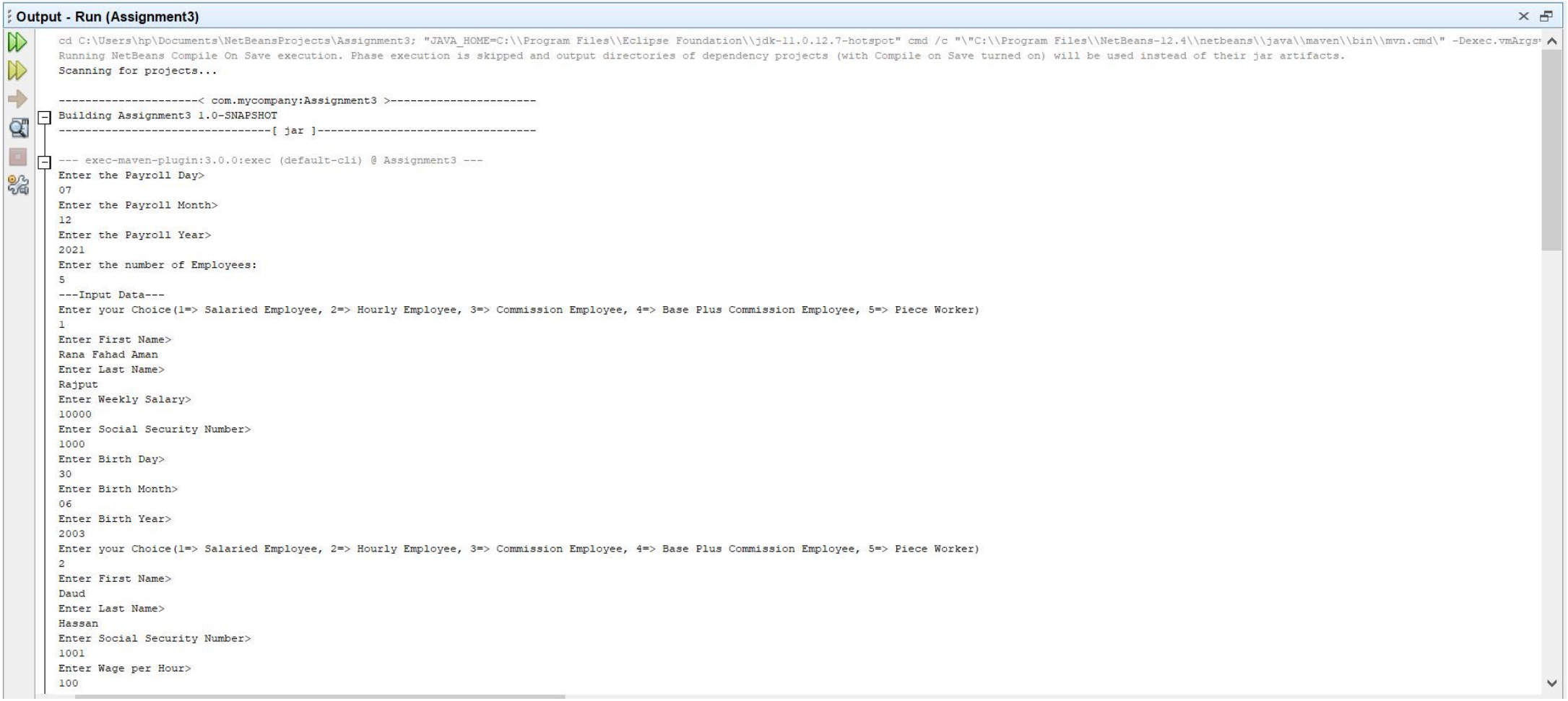
```
package com.mycompany.assignment3;

public class PieceWorker extends Employee {

    private int wage;
    private int pieces;

    public PieceWorker(int wage, int pieces, String firstName,
            String lastName, String SSN, Date birthDate) {
        super(firstName, lastName, SSN, birthDate);
        this.wage = wage;
        this.pieces = pieces;
    }

    @Override
    public double earnings() {
        return wage * pieces;
    }

    @Override
    public String toString() {
        return super.toString() + "PieceWorker{" +
                "Wage=" + wage + ", Pieces=" + pieces + '}';
    }

}
```

```
package com.mycompany.assignment3;

import java.util.Scanner;

public class Payroll {

    public static void main(String[] args) {
        Scanner intScan = new Scanner(System.in);
        Scanner stringScan = new Scanner(System.in);

        System.out.println("Enter the Payroll Day> ");
        int day = intScan.nextInt();
        System.out.println("Enter the Payroll Month> ");
        int month = intScan.nextInt();
        System.out.println("Enter the Payroll Year> ");
        int year = intScan.nextInt();

        Date payrollDate = new Date(day,month,year);
        System.out.println("Enter the number of Employees: ");
        int arraySize = intScan.nextInt();

        Employee array[] = new Employee[arraySize];

        System.out.println("---Input Data---");

        for (int i = 0; i < array.length; i++) {
            System.out.println("Enter your Choice(1=> Salaried Employee, 2="
                    + "> Hourly Employee, 3=> Commission Employee, 4=>"
                    + " Base Plus Commission Employee, 5=> Piece Worker)");
            int choice = intScan.nextInt();

            switch (choice) {
                case 1:
                    System.out.println("Enter First Name> ");
                    String firstName1 = stringScan.nextLine();
                    System.out.println("Enter Last Name> ");
                    String lastName1 = stringScan.nextLine();
                    System.out.println("Enter Weekly Salary> ");
                    int weeklySalary1 = intScan.nextInt();
                    System.out.println("Enter Social Security Number> ");
                    String SSN1 = stringScan.nextLine();
                    System.out.println("Enter Birth Day> ");
                    int birthDay1 = intScan.nextInt();
                    System.out.println("Enter Birth Month> ");
                    int birthMonth1 = intScan.nextInt();
                    System.out.println("Enter Birth Year> ");
                    int birthYear1 = intScan.nextInt();

                    Date Date1 = new Date(birthDay1,birthMonth1,birthYear1);
                    array[i] = new SalariedEmployee(weeklySalary1,firstName1,
                            lastName1,SSN1,Date1);
                    break;
                case 2:
                    System.out.println("Enter First Name> ");
```

```
                String firstName2 = stringScan.nextLine();
                System.out.println("Enter Last Name> ");
                String lastName2 = stringScan.nextLine();
                System.out.println("Enter Social Security Number> ");
                String SSN2 = stringScan.nextLine();
                System.out.println("Enter Wage per Hour> ");
                int wage = intScan.nextInt();
                System.out.println("Enter Work Hours> ");
                int hours = intScan.nextInt();
                System.out.println("Enter Birth Day> ");
                int birthDay2 = intScan.nextInt();
                System.out.println("Enter Birth Month> ");
                int birthMonth2 = intScan.nextInt();
                System.out.println("Enter Birth Year> ");
                int birthYear2 = intScan.nextInt();

                Date Date2 = new Date(birthDay2,birthMonth2,birthYear2);
                array[i] = new HourlyEmployee(wage,hours,firstName2,
                        lastName2,SSN2,Date2);

                break;
            case 3:
                System.out.println("Enter First Name> ");
                String firstName3 = stringScan.nextLine();
                System.out.println("Enter Last Name> ");
                String lastName3 = stringScan.nextLine();
                System.out.println("Enter Social Security Number> ");
                String SSN3 = stringScan.nextLine();
                System.out.println("Enter Commission Rate> ");
                int commissionRate1 = intScan.nextInt();
                System.out.println("Enter Gross Sales> ");
                int grossSales1 = intScan.nextInt();
                System.out.println("Enter Birth Day> ");
                int birthDay3 = intScan.nextInt();
                System.out.println("Enter Birth Month> ");
                int birthMonth3 = intScan.nextInt();
                System.out.println("Enter Birth Year> ");
                int birthYear3 = intScan.nextInt();

                Date Date3 = new Date(birthDay3,birthMonth3,birthYear3);

                array[i] = new CommissionEmployee(commissionRate1,
                        grossSales1, firstName3,lastName3,SSN3,Date3);

                break;
            case 4:
                System.out.println("Enter First Name> ");
                String firstName4 = stringScan.nextLine();
                System.out.println("Enter Last Name> ");
                String lastName4 = stringScan.nextLine();
                System.out.println("Enter Social Security Number> ");
                String SSN4= stringScan.nextLine();
                System.out.println("Enter Base Salary> ");
                int baseSalary = intScan.nextInt();
```

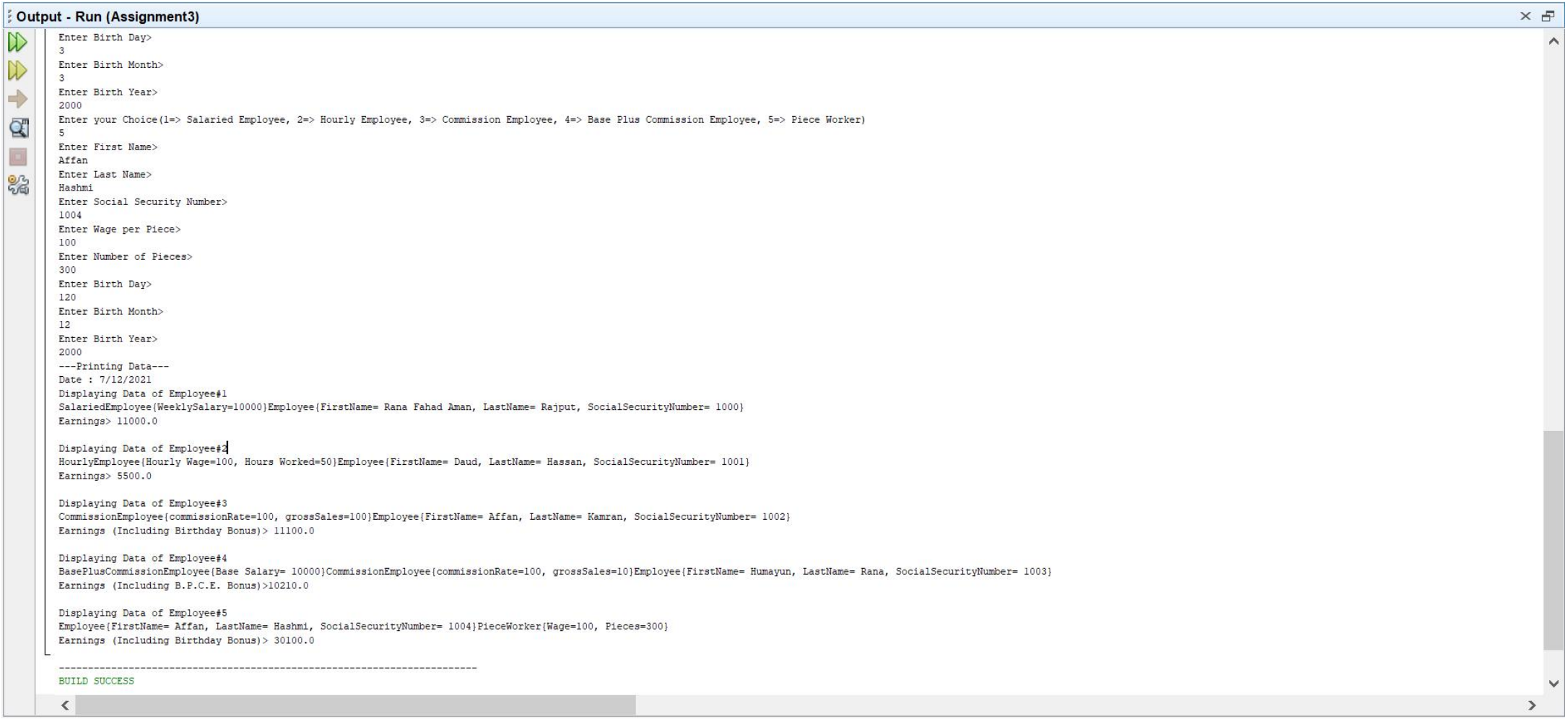
```
                System.out.println("Enter Commission Rate> ");
                int commissionRate2 = intScan.nextInt();
                System.out.println("Enter Gross Sales> ");
                int grossSales2 = intScan.nextInt();
                System.out.println("Enter Birth Day> ");
                int birthDay4 = intScan.nextInt();
                System.out.println("Enter Birth Month> ");
                int birthMonth4 = intScan.nextInt();
                System.out.println("Enter Birth Year> ");
                int birthYear4 = intScan.nextInt();

                Date Date4 = new Date(birthDay4,birthMonth4,birthYear4);
                array[i] = new BasePlusCommissionEmployee(commissionRate2,
                        grossSales2,baseSalary,firstName4,
                        lastName4,SSN4,Date4);

                break;
            case 5:
                System.out.println("Enter First Name> ");
                String firstName5 = stringScan.nextLine();
                System.out.println("Enter Last Name> ");
                String lastName5 = stringScan.nextLine();
                System.out.println("Enter Social Security Number> ");
                String SSN5 = stringScan.nextLine();
                System.out.println("Enter Wage per Piece> ");
                int wagePerPiece = intScan.nextInt();
                System.out.println("Enter Number of Pieces> ");
                int numOfPieces = intScan.nextInt();
                System.out.println("Enter Birth Day> ");
                int birthDay5 = intScan.nextInt();
                System.out.println("Enter Birth Month> ");
                int birthMonth5 = intScan.nextInt();
                System.out.println("Enter Birth Year> ");
                int birthYear5 = intScan.nextInt();

                Date Date5 = new Date(birthDay5,birthMonth5,birthYear5);
                array[i] = new PieceWorker(wagePerPiece,numOfPieces,
                        firstName5,lastName5,SSN5,Date5);

                break;
            default:
                System.out.println("Invalid Choice");
                break;
        }

    }

    System.out.println("---Printing Data---");
    System.out.printf("Date : %d/%d/%d\n",day,month,year);

    for (int i = 0; i < array.length; i++) {
        System.out.printf("Displaying Data of Employee#%d\n",i+1);
        System.out.println(array[i].toString());
        if (array[i] instanceof BasePlusCommissionEmployee) {
```

```
                System.out.println("Earnings (Including B.P.C.E. Bonus)>" +
                        (array[i].earnings()+100));
                System.out.println("");
            }
            else if (array[i].getBirthDate().getMonth() == payrollDate.getMonth()){
                    System.out.println("Earnings (Including Birthday Bonus)> " +
                            (array[i].earnings()+100));
                    System.out.println("");
            }
            else {
                    System.out.println("Earnings> " + array[i].earnings());
                    System.out.println("");
            }

           }
        }
    }
```


Output - Run (Assignment3)
cd C:\Users\hp\Documents\NetBeansProjects\Assignment3; "JAVA_HOME=C:\\Program Files\\Eclipse Foundation\\jdk-11.0.12.7-hotspot" cmd /c "\"C:\\Program Files\\NetBeans-12.4\\netbeans\\java\\maven\\bin\\mvn.cmd\" -Dexec.vmArgs=
Running NetBeans Compile On Save execution. Phase execution is skipped and output directories of dependency projects (with Compile on Save turned on) will be used instead of their jar artifacts.
Scanning for projects...
----------------------< com.mycompany:Assignment3 >----------------------
Building Assignment3 1.0-SNAPSHOT
--------------------------------[jar]---------------------------------
--- exec-maven-plugin:3.0.0:exec (default-cli) @ Assignment3 ---
Enter the Payroll Day>
07
Enter the Payroll Month>
12
Enter the Payroll Year>
2021
Enter the number of Employees:
5
---Input Data---
Enter your Choice(1=> Salaried Employee, 2=> Hourly Employee, 3=> Commission Employee, 4=> Base Plus Commission Employee, 5=> Piece Worker)
1
Enter First Name>
Rana Fahad Aman
Enter Last Name>
Rajput
Enter Weekly Salary>
10000
Enter Social Security Number>
1000
Enter Birth Day>
30
Enter Birth Month>
06
Enter Birth Year>
2003
Enter your Choice(1=> Salaried Employee, 2=> Hourly Employee, 3=> Commission Employee, 4=> Base Plus Commission Employee, 5=> Piece Worker)
2
Enter First Name>
Daud
Enter Last Name>
Hassan
Enter Social Security Number>
1001
Enter Wage per Hour>
100

Output - Run (Assignment3)

```
Enter Wage per Hour>
100
Enter Work Hours>
50
Enter Birth Day>
1
Enter Birth Month>
1
Enter Birth Year>
2001
Enter your Choice(1=> Salaried Employee, 2=> Hourly Employee, 3=> Commission Employee, 4=> Base Plus Commission Employee, 5=> Piece Worker)
3
Enter First Name>
Affan
Enter Last Name>
Kamran
Enter Social Security Number>
1002
Enter Commission Rate>
100
Enter Gross Sales>
100
Enter Birth Day>
12
Enter Birth Month>
12
Enter Birth Year>
2000
Enter your Choice(1=> Salaried Employee, 2=> Hourly Employee, 3=> Commission Employee, 4=> Base Plus Commission Employee, 5=> Piece Worker)
4
Enter First Name>
Humayun
Enter Last Name>
Rana
Enter Social Security Number>
1003
Enter Base Salary>
10000
Enter Commission Rate>
100
Enter Gross Sales>
10
Enter Birth Day>
3
Enter Birth Month>
```


Output - Run (Assignment3)
Enter Birth Day>
3
Enter Birth Month>
3
Enter Birth Year>
2000
Enter your Choice(1=> Salaried Employee, 2=> Hourly Employee, 3=> Commission Employee, 4=> Base Plus Commission Employee, 5=> Piece Worker)
5
Enter First Name>
Affan
Enter Last Name>
Hashmi
Enter Social Security Number>
1004
Enter Wage per Piece>
100
Enter Number of Pieces>
300
Enter Birth Day>
120
Enter Birth Month>
12
Enter Birth Year>
2000
---Printing Data---
Date : 7/12/2021
Displaying Data of Employee#1
SalariedEmployee{WeeklySalary=10000}Employee{FirstName= Rana Fahad Aman, LastName= Rajput, SocialSecurityNumber= 1000}
Earnings> 11000.0
Displaying Data of Employee#2
HourlyEmployee{Hourly Wage=100, Hours Worked=50}Employee{FirstName= Daud, LastName= Hassan, SocialSecurityNumber= 1001}
Earnings> 5500.0
Displaying Data of Employee#3
CommissionEmployee{commissionRate=100, grossSales=100}Employee{FirstName= Affan, LastName= Kamran, SocialSecurityNumber= 1002}
Earnings (Including Birthday Bonus)> 11100.0
Displaying Data of Employee#4
BasePlusCommissionEmployee{Base Salary= 10000}CommissionEmployee{commissionRate=100, grossSales=10}Employee{FirstName= Humayun, LastName= Rana, SocialSecurityNumber= 1003}
Earnings (Including B.P.C.E. Bonus)>10210.0
Displaying Data of Employee#5
Employee{FirstName= Affan, LastName= Hashmi, SocialSecurityNumber= 1004}PieceWorker{Wage=100, Pieces=300}
Earnings (Including Birthday Bonus)> 30100.0
BUILD SUCCESS