```java
/**
 * Name: Sunil Sunichura
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 * Assignment 3
 * Date: November 23, 2019
 */
package paytime;

import java.util.Arrays;

public class Employee {

    private int empNumbers[] = {101, 103, 106, 109, 110, 113, 116, 118, 120};
    private double hoursWorked;
    private double hourlyRate;
    private double regularPay;
    private double incomeTaxRate;
    private double incomeTax;
    private double overtimeHoursWorked;
    private double overtimeHourlyRate;
    private double overtimePay;
    private double overtimeTaxRate;
    private double overtimeTax;

    public boolean findEmpNum(int empNum) {
        Arrays.sort(empNumbers);
        int position = Arrays.binarySearch(empNumbers, empNum);
        return position >= 0;
    }

    private void calculatePay(double hoursWorked, double hourlyRate) {
        if (this.hoursWorked <= 40) {
            this.hoursWorked = hoursWorked;
            this.hourlyRate = hourlyRate;
            regularPay = hoursWorked * hourlyRate;
        }
        else {
            regularPay = 40 * hourlyRate;
        }
    }

    public void setHoursWorked(double hoursWorked) {
        this.hoursWorked = hoursWorked;
    }

    public void setHourlyRate(double hourlyRate) {
        this.hourlyRate = hourlyRate;
    }

    public double getPay() {
        calculatePay(hoursWorked, hourlyRate);
```

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52          return regularPay;
53      }
54
55      private void incomeTax() {
56          if (regularPay <= 300.00) {
57              incomeTaxRate = 0.10;
58          }
59          else if (regularPay <= 400.00) {
60              incomeTaxRate = 0.12;
61          }
62          else if (regularPay <= 500.00) {
63              incomeTaxRate = 0.15;
64          }
65          else {
66              incomeTaxRate = 0.20;
67          }
68          incomeTax = incomeTaxRate * regularPay;
69      }
70
71      public double getIncomeTax() {
72          incomeTax();
73          return incomeTax;
74      }
75
76      public double getNetPay() {
77          return regularPay - incomeTax;
78      }
79
80      private void calculateOvertimePay(double hoursWorked, double hourlyRate) {
81          if (hoursWorked > 40) {
82              overtimeHoursWorked = hoursWorked - 40;
83              overtimeHourlyRate = hourlyRate * 1.5;
84              overtimePay = overtimeHoursWorked * overtimeHourlyRate;
85          }
86      }
87
88      public double getOvertimePay() {
89          calculateOvertimePay(hoursWorked, hourlyRate);
90          return overtimePay;
91      }
92
93      private void calculateOvertimeTaxes() {
94          if (overtimePay > 0) {
95              overtimeTaxRate = 0.25;
96              overtimeTax = overtimePay * overtimeTaxRate;
97          }
98      }
99
100     public double getOvertimeTaxes() {
101         calculateOvertimeTaxes();
102         return overtimeTax;
```

```
103     }
104
105     public double getOvertimeNetPay() {
106         return overtimePay - overtimeTax;
107     }
108
109     public double getTotalNetPay() {
110         return (regularPay - incomeTax)
111                 + (overtimePay - overtimeTax);
112     }
113 }
```