

ST Assignment 2

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Marvel Enterprise needs a program to calculate how much to pay their hourly employees. The Indian Department of Labor requires that employees get paid time and a half for any hours over 40 that they work in a single week. For example, if an employee works 45 hours, they get 5 hours of overtime, at 1.5 times their base pay. The Indian Department of Labor requires that hourly employees be paid at least 400Rs. an hour. Satyam Corp requires that an employee not work more than 60 hours in a week.

Summary of Rules:

- An employee gets paid (hours worked) × (base pay), for each hour up to 40 hours.
- For every hour over 40, they get overtime = (base pay) × 1.5.
- The base pay must not be less than the minimum wage (400Rs. an hour). If it is, print an error.
- If the number of hours is greater than 60, print an error message.

Create a new class called MarvelEnterprise. Write a method that takes the base pay and hours worked as parameters, and prints the total pay or an error. Write a main method that calls this method for each of these employees:

	Base Pay	Hours Worked
Employee A	350	35
Employee B	420	47
Employee C	510	73

Code:

```
package lab_2;

public class MarvelEnterprises {

    public void calculatePay(String employeeName, int basePay, int
hoursWorked) {
        final int minimumPay = 400;
        if (hoursWorked > 60) {
            System.out.printf("Error: More than 60 hours work for %s\n",
employeeName);
            return;
        }

        if (basePay < minimumPay) {
            System.out.printf("Error: Base Pay less than Minimum Wage
for %s\n", employeeName);
            return;
        }
        int normalHours = Math.min(40, hoursWorked);
        int extraHours = Math.max(0, hoursWorked - 40);

        double totalPay = (normalHours + extraHours * 1.5) * basePay;
        System.out.printf("Total Pay for %s: %.2f\n", employeeName,
totalPay);
    }
}
```

```
package lab_2;

public class Main {
    public static void main(String[] args) {
        var me = new MarvelEnterprises();
        me.calculatePay("Employee A", 350, 35);
        me.calculatePay("Employee B", 420, 47);
        me.calculatePay("Employee C", 510, 73);
    }
}
```

Output:

```
Error: Base Pay less than Minimum Wage for Employee A  
Total Pay for Employee B: 21210.00  
Error: More than 60 hours work for Employee C
```