MIT OpenCourseWare http://ocw.mit.edu

6.092 Introduction to Software Engineering in Java January (IAP) 2009

For information about citing these materials or our Terms of Use, visit: http://ocw.mit.edu/terms.

6.092: Assignment 2

Foo Corporation needs a program to calculate how much to pay their hourly employees. The US 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 State of Massachusetts requires that hourly employees be paid at least \$8.00 an hour. Foo 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) \times 1.5.
- The base pay must not be less than the minimum wage (\$8.00 an hour). If it is, print an error.
- If the number of hours is greater than 60, print an error.

Directions

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 for each of these employees:

Base Pay Hours Worked

1 \$7.50 35 2 \$8.20 47 3 \$10.00 73

Submission Instructions

Submit your file FooCorporation.java on the Stellar website of the class.

Hint

Do *not* try to write the entire program in one go. It is much easier to write a small piece and test it, then write another small piece and test it. For example, start by writing just a skeleton of your method and your main program. Then add the code to do the normal salary computation, without any special rules. Then add each additional rule, one at a time. You should test your program with simple test inputs to check that you handle each case.

Good luck!