

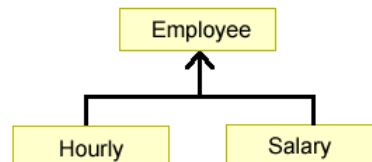
AP Computer Science Homework 15

Due date: Monday, March 7, 2016

Instructor: Mr. Alwin Tareen

Part A: Wages for a Company's Employees

- A company hires its employees as either hourly or salary workers. A set of classes is used to handle the different types of employees at the company. The class hierarchy is shown in the following diagram.



- The class **Employee** is specified as an abstract class.
- Each employee has a name and social security number. Two additional classes are used to represent the two types of employees and are described in the table below.

Class	Description
Hourly	Hourly employees are paid by the hour. The monthly salary is calculated by multiplying the number of hours worked each month by the hourly rate. Hourly workers are also paid time and a half for any work done beyond 160 hours a month (40 hours x 4 weeks).
Salary	Salary employees are paid a yearly salary. The monthly salary is calculated by dividing the yearly salary by 12 (12 months). Salary employees are not paid overtime.

- The complete implementation of the **Salary** class has been provided for you. I encourage you to read through this **Salary** class to gain some valuable hints on how best to solve this assignment.
- Write the complete class declaration for the class **Hourly**. Include all necessary instance variables and implementations of its constructor and methods. The constructor should take four parameters that indicate the employee's name, social security number, hourly wage, and hours worked for month. Implement the method **getSalary** so that it calculates and returns the monthly salary as described above.
- The output should look like the following:

Name = Jimmy Stewart
Social Security # = 232-12-8983
Monthly Salary = 1015.0

Name = John Wayne
Social Security # = 423-23-1212
Monthly Salary = 1615.0

- You are provided with the files `Employee.java`, `Hourly.java`, `Salary.java`, `CompanyTest.java` and `CompanyJUnitTest.java` to develop this program.
- Write your solution in the `Hourly.java` file. Do not alter any of the other files.
- Write your code in the areas indicated by `// YOUR CODE HERE`.
- On your BlueJ project window, you should see a button labelled `Run Tests`. Press this button to run the `JUnit` tests.
- You should see a `BlueJ: Test Results` window pop up. If everything is correct, you should see a green bar that indicates that your code has passed the `JUnit` tests. If your program is incorrect, you will see a red bar. You can click on the method name to get more information about the problem. Otherwise, just click on the `Close` button, and you can go ahead and upload this program to Web-CAT.

Part B: Submission

- Submit your Java programs `Hourly.java` by uploading them to the Web-CAT automated grading platform.