

**CSC 2010**  
**Homework #4**  
**Due 11/03/2015 11:30 pm**

***MPL (Optional)***

Sections: 2.3, 3.1, 4.1

***Programming (Not Optional)***

For this assignment you must write two programs in Java as described below.

Make sure your java programs have a comment at the beginning that includes your name and the fact that this is homework 4.

Make sure your programs are properly indented.

Both your programs need a main method and three other methods.

After you have written it, compile it and run it to make sure it works. If your programs won't compile you will get a 0.

Then submit to desire2learn .java file and .class file.

- 1.** Write a program called Program1 with a main method that asks the user for his or her pay rate and the number of hours he or she worked this week. Then the main method should call the following two methods and store the results it gets from each method.

getTotalPay - takes two parameters, an integer for the number of hours worked and a double for the pay rate. If the number of hours is less than or equal to 40, it simply multiplies them together and returns the result. If the number of hours is greater than 40, he gets an additional dollar for each hour over 40 that he or she has worked. For example if the pay rate is \$10 and someone worked 41 hours, they would get \$411.00.

getPercentage - takes one parameter - the number of hours worked, and returns the time worked as a percentage of 40 hours. For example, if the number of hours worked is 20, it should return 50.0.

The main method also calls a third method which displays the results nicely on the screen. The third method, displayOutput, should have four parameters and should print the output as shown below (use printf).

Pay Rate: \$10.0  
Hours Worked: 41  
Percentage worked per week: 102.5%

Total pay earned: \$411.00

- 2.** Write a program called Program2 with a main method that asks the user for his or her first name and converts it into all lowercase letters. Then the main method should call all three of the following void methods which each print out their own results.

printReverse - prints the name in reverse all on one line

printNickName - prints the first two letters and the last two letters of the name. For ex-ample, the name kebina, would produce kena.

printPyramid - prints the name with one letter on each line, but show the first letter once, the second letter twice, the third letter three times...etc. You will need a nested loop. Here is what the output would like for the name mary.

```
m  
aa  
rrr  
yyyy
```