CMPS 150 – Lab 12 – April 12, 2017

The following is an exercise in working with Python classes (as well as all control structures & functions).
When done, be sure your Python source code runs properly and upload your completed lab to your TA on Moodle.
This exercise will be available online on Moodle if you wish to use it again.

Log in to CMPS Lab

1. ***Copy the lab file for today from the class Moodle site.***

   Look for the file for today "lab12.py" -- and save the file to your machine.

2. ***At the Linux desktop, open a terminal window (i.e., command line window)***

   Do this by right-clicking on the desktop and selecting "Open Terminal" from the menu.

3. ***Launch IDLE.***

   ```
   idle3.5
   ```

   Or, on the MacMini, select "Go" from the menu bar, then "Applications"
   Find the Python 3.5 applications, double-click on it, and select "IDLE"

4. ***Edit the first two lines of the code to have your name/clid/section.***

```
# Author:       Your-Name
# CLID/Section: Your-CLID & section-number go here
```

5. ***Complete the source code as follows:***

   Write a program using a class for a clock. In the file copied to your home directory, the constructor method and parts of other class methods are written for you.

   Also, a complete main( ) function is written which uses the Clock class.

   Complete all Clock class methods (functions) and get your "clock" running correctly.

   Here are some "gotchas" to look out for:

   - when printing minutes or seconds that are less than 10, you must precede it with a zero (0)
   - when displaying a 12 hour clock, hours beyond 12 must be converted by subtracting 12
   - also, when displaying a 12 hour clock, 0 – 11 is AM and 12 – 23 is PM
   - when incrementing the clock, you always increment 1 second

6. ***When you have edited and reviewed the code, save the file, and run your code.***

7. ***Debug your code (perhaps you can skip this step).***

If you have any errors in your code, the interpreter will produce an error, with a line number, where it detects there is a problem with your code. Return to the editor and correct the error. Run it through the interpreter again (step 6) until it runs with no errors.

8. Sample Run

```
The time is 12: 00: 00 AM
The time is 0: 00: 00

The time is 10: 30: 05 PM
The time is 22: 30: 05

The time is 11: 59: 59 AM
The time is 11: 59: 59

The time is 12: 00: 00 PM
The time is 12: 00: 00
```

9. Exit Python
Close the Python IDLE editor by clicking the X in the upper right corner (or selecting File/Exit from the menus).
Close the Python IDLE shell by clicking the X in the upper right corner (or typing Ctrl-D).

10. Exit Terminal
Close the terminal window by clicking the X in the upper right corner (or typing Ctrl-D).

11. Upload to Moodle
Get in a browser and login to Moodle.
Instead of going to the Lecture Section, go to your specific upload section on the Moodle site.
Here you will see the lab for today. Click on the link for Lab #12.
Click to "Upload a File"
Select to "Choose a File" and go about the process of browsing/finding "lab12.py" on the computer
Select to "Upload this File"

When returned to the Upload screen, MAKE SURE to click on the "Save Changes" button.

You will be returned to the "Lab #12" screen. This time you should see your source code file listed on it.

12. Logout of Moodle

13. Logout of Linux
Logout is found on the System (toolbar at the top) menu.