# Homework 4

Due: **10/16 at 11:59pm**. Please do it early because you need a working development environment for the following study.

Please read <https://github.com/ying-teaching/python/blob/master/0-installation-setup/git-and-github.md> for detail instructions to setup your development tools, create a Github account, and how to push your code to GitHub repository.

# The Submission

The detail requirements are given in the next section. Once you complete it, please create a one-line text file (a file with “.txt” postfix) that a link to your GitHub homework repository. It is recommended to use a repository name that is the same as your homework. Please submit the text file to the BeachBoard dropbox.

For example, below is the sample content of your hw.txt (the link is a sample link, please change it to your GitHub repository) for homeworkx (x is the homework number such as 1, 2 ,3…)

https://github.com/your-github-name/homeworkx.git

Wrong file format, invalid URL, or un-working file is in-completed and gets 0 point.

# The Tasks

Create a folder “homework4” as your project workspace. It is the root folder of your homework project.

The folder should have two files as below:

* 1. “task1.py” file

A prime number is a number that is only evenly divisible by itself and 1. For example, the number 5 is prime because it can only be evenly divided by 1 and 5. The number 6, however, is not prime because it can be divided evenly by 2 and 3.

Write a Boolean function named **is\_prime** which takes an integer as an argument  
and returns true if the argument is a prime number, or false otherwise.

Then write a program that generates six random number between 1 and 100 (inclusive) and print out the result like the following (each run will have six different random numbers):

The random number 87 is a not a prime number.

The random number 23 is a prime number.

The random number 34 is a not a prime number.

The random number 96 is a not prime number.

The random number 6 is a not a prime number.

The random number 11 is a prime number.

* 1. “task2.py” file

Create a function that randomly generates and returns a tuple of two positive one-digit integers. Then prompt the user for the multiplication of the two numbers. For example, if the generated number is 3 and 7, the prompt message is

How much is 3 times 7?

Then compare the user answer with the correct result. If the answer is correct, display a message “done”. Otherwise, if the user input 20, prompt:

“3 times 7 is not 20, please try again: “

Keep asking the user input until it types the correct answer.