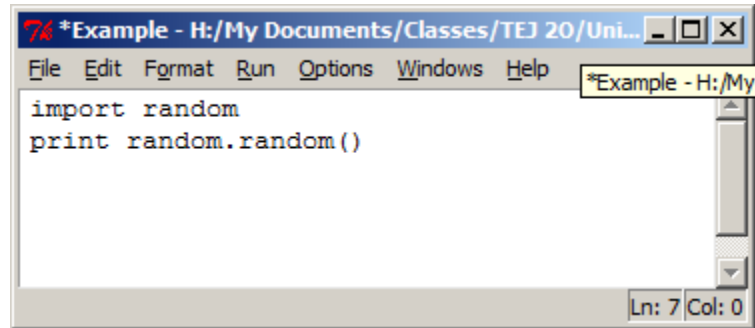# Python - Random Numbers

To generate a random number in Python, we must first call upon the random number generator (using **import**). Next we can print a random number that is generated by **random.**
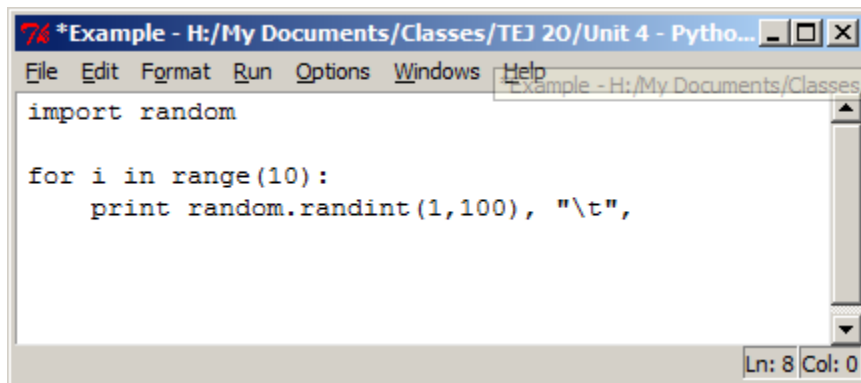
```
import random
print random.random()
```

The number generated will be a decimal number between 0 and 1 (eg : 0.7236719)

Integers can also be generated using :

random.randint(1, 10)

This will generate a random number between the range 1 and 10.

To generate and print 10 random numbers between 1 and 100:

```
import random

for i in range(10):
    print random.randint(1,100), "\t",
```

* the **"\t",** is a tab, to print the numbers across the screen

Assignment #9

1. Create a program that has the user enter the values of the range of the random numbers to be generated. Have the program generate and display 5 random numbers in that range.

2. Create a guessing game program with the following criteria :

   * The number to be guessed is between 1 and 100
   * The answer is to be generated randomly
   * A statement is to be displayed if a number is entered outside 1 to 100
   * The program will display a message :   "Higher" or "Lower" or "Got it!"

3. Create a Slot Machine game that is continuous, until the user enters "n".
   A slot machine has 3 wheels that are spun. Therefore, the game is to generate 3 random numbers (6, 7 or 8) and displayed as shown below.
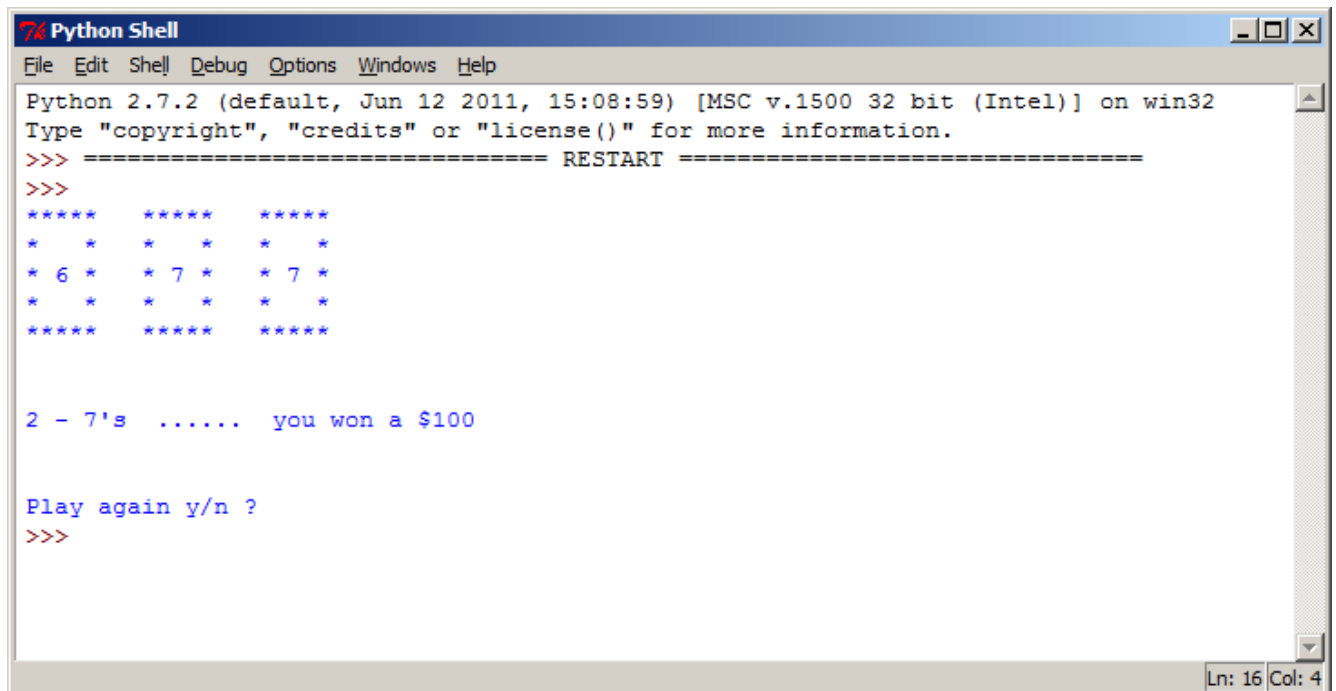   The program will then check to see if the user won any money and display one of the messages:

   Zero 7's – "Try Again"

   One 7 – "1 - 7 ...... you won a $50"

   Two 7's – "2 - 7's ...... you won a $100"

   Three 7's – "Jackpot! $1000"

```
7% Python Shell                                                          _ | □ | ×
File  Edit  Shell  Debug  Options  Windows  Help
Python 2.7.2 (default, Jun 12 2011, 15:08:59) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> ============================== RESTART ==================================
>>>
*****    *****    *****
*   *    *   *    *   *
* 6 *    * 7 *    * 7 *
*   *    *   *    *   *
*****    *****    *****


2 - 7's  ......   you won a $100


Play again y/n ?
>>>
                                                                    Ln: 16 Col: 4
```

4. Create a game that will play rock, paper scissors against the computer. The computers answer is to be generated randomly and the players answer is to be inputted from the keyboard. The program is to be continious

5. Write a program that simultes the rolling of 1 dice. The program should roll the dice randomly, 100 times and output the results of how many 1,2,3,4,5 and 6's were rolled.

```
74 Python Shell                                                          _ □ ×
File  Edit  Shell  Debug  Options  Windows  Help
Python 2.7.2 (default, Jun 12 2011, 15:08:59) [MSC v.1500 32 bit (Intel)] on win ▲
32
Type "copyright", "credits" or "license()" for more information.
>>> ================================ RESTART ================================
>>>
3        3        5        3        5        5        3        4        5        2
5        3        3        2        1        6        1        3        2        3
4        3        5        3        6        4        1        1        6        4
5        5        1        4        1        6        4        4        4        1
2        4        2        5        4        6        1        1        4        2
1        4        5        6        3        2        5        3        1        4
4        1        1        4        1        4        2        5        4        6
6        5        1        2        6        1        5        4        3        3
2        3        3        6        6        1        5        6        5        6
4        3        3        6        2        2        4        3        6        1

18 ones
12 twos
19 threes
20 fours
16 fives
15 sixes
>>>

                                                                      Ln: 12 Col: 4
```
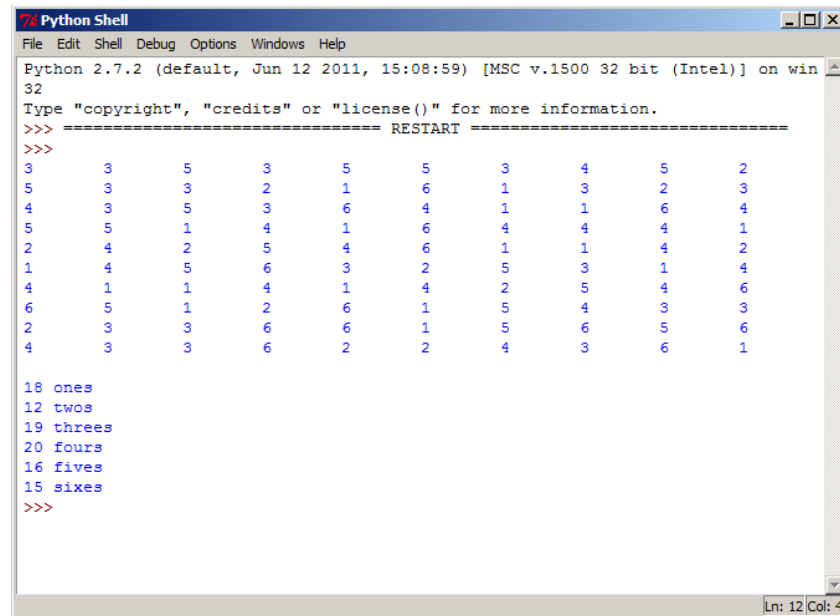
6. Write a program that simulates the rolling of 2 dice. The dice roll should be random and the result of the 2 dice rolled as well as the total should be displayed.