MATLAB Lab. 6

2012.05.03
Starting Python

• Installing Python
  – http://www.python.org/
  – http://sourceforge.net/projects/pywin32/

• You need to pick a proper version of Python installer
Variables

changing = 3
print (changing)

changing = 9
print (changing)

different = 12
print (different)
print (changing)

red = 5
blue = 10
print (red, blue)

yellow = red
print (yellow, red, blue)

red = blue
print (yellow, red, blue)
Strings

• A list of characters

```python
>>> print ('I am a single quoted string')
I am a single quoted string
>>> print ("I am a double quoted string")
I am a double quoted string
>>> print ("""I am a triple quoted string"""")
I am a triple quoted string
```

Question:

So I said, "You don't know me! You'll never understand me!"
```python
>>> print ("So I said, ""You don't know me! You'll never understand me!"")
So I said, "You don't know me! You'll never understand me!"

>>> print ('So I said, "You don\'t know me! You\'ll never understand me!"')
So I said, "You don't know me! You'll never understand me!"

>>> print ("This will result in only three backslashes: \ \ \")
This will result in only three backslashes: \ \ \\

>>> print (""""The double quotation mark (") is used to indicate direct quotations."""")
The double quotation mark (") is used to indicate direct quotations.

>>> print("Hello, world!")
Hello, world!

>>> print ("Hello, " + "world!")
Hello, world!

>>> print ("bouncy, " * 10)
bouncy, bouncy, bouncy, bouncy, bouncy, bouncy, bouncy, bouncy, bouncy, bouncy,

>>> print (len("Hello, world!"))
13
```
Learned Functions

• `print()`
  – >>> print('single quotation')
  – >>> print("double quotation")
  – >>> print("""triple quotation up to here"""")

• `raw_input()`, `len()`, `str()`
  – >>> w = raw_input("Input any word:\n")
  – >>> l = len(w)
  – >>> s = w + " has " + str(l) + " characters."

• `int()`
  – >>> height = raw_input("Input your height")
  – >>> shoe = raw_input("Your secret height?")
  – >>> realHeight = int(height) + int(shoe)
  – Q: What will happen if we don’t use ‘int’ above?
Mathematical Operators

- +, -, *, /
- // : floor division
- %
- abs(a)
- a**b
- sqrt(a)
  - *from math import sqrt* at the top of your file
If clause

• if – elif – else usage
  
  if [condition] :
      [statements]
  elif [condition] :
      [statements]
  else :
      [statements]

• and, or, not

  • >>> 2>1
  • >>> 2>1 and 3>4
  • >>> 4<2 or 1>2
  • >>> not 3<2
• Set of data
  – >>>> a = 1,2,3
  – >>>> b = 1,2,'a'

• Examples
  – >>>> 1 in a
  – >>>> ‘1’ in a
  – >>>> a[1]
  – >>>> a.index(1)
**Problem 1**

• Make a program that finds the maximum number among three numbers using ‘if’ statement.
• 3 numbers are input from keyboard separated by comma(,)

• Example

  Input 3 numbers : 10, 15, 14
  Answer is : 15
Problem 2

• Make a maximum number finding program of Problem 1 with 4 numbers.