

EET 2812

Activity 5

Single Board Computer (RPI)

rogramming

Cuyahoga Community College

Youth Technology Academy



# ACTIVITY

## Programming with Python on RPi

### Variables

**Overview:** A variable is something that stores a value that may change. Variables store data with a specific name. Different types of data such as numbers, letters, words or strings, and Booleans can be stored in variables. A Boolean is a type of data where only two values can be stored, true or false.

In Python, the name of the variable is always on the left side of the equal sign and the value of the variable is always on the right side of the equal sign.

**Vocabulary:** variable, boolean

Log into RPi using the default log in.

Username: pi

Password: raspberry

If necessary, open a terminal window.

Remember: “\$” means “type what follows on the command line”

- make a directory called my\_python to store our programs by typing

**\$mkdir my\_python**

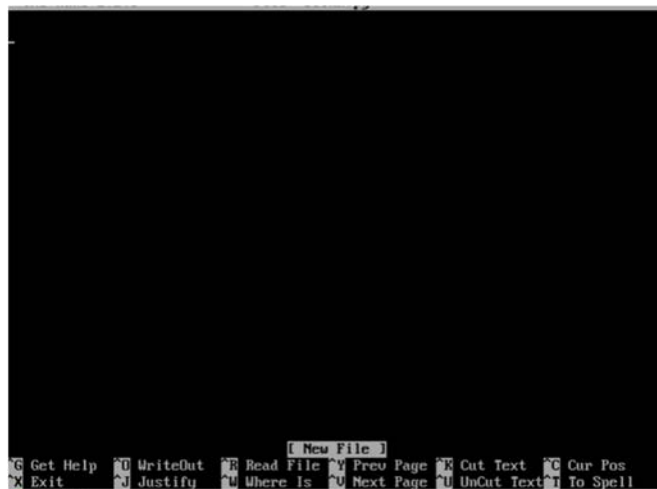
- you can change to the my\_python directory by typing

**\$cd my\_python**

Create and open a text file called variables.py by typing:

**\$nano variables.py**

Your screen should look like this:



Type the following code into the document:

```
robotics=1  
  
print (robotics)
```

Then press **CTRL O** to write (save) the file, **ENTER** and then **CTRL X** to exit. When finished type in the command **\$sudo python variables.py** to run the program.

You should see 1 on the screen after pressing Enter.

Reopen the variables.py document and type in the following text. What does each set of code print?

1. What will the following code print?

```
red=1  
  
blue=2  
  
yellow=3  
  
print (red, blue, yellow)
```

2. You can also perform arithmetic operations with variables.

```
yellow= blue + red  
  
orange= yellow * blue  
  
print (yellow)
```

3. Python allows you to assign a single value to multiple variables simultaneously

```
x=y=z=1  
  
print (x, y, z)  
  
purple, pink, black= 1, 2, beautiful  
  
print (purple, pink, black)
```

### **Your Turn:**

1. Make up three variables, assign a number value to each and perform some arithmetic operations on the variables. Print the results.
2. Assign multiple variables the same value and print the results.