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CS110

Homework 3

2/17/2016

### Questions:

Answers to the questions normally asked at the end of each homework assignment

Usually, this section will be quite a bit longer. Write a bit a short paragraph

### variables.py

```
num_var = 5
char_var = 'a'
bool_var_1 = True
bool_var_2 = False
```

Notice the use of the Courier font, which is much better for displaying code and output

```
print("The current value of num_var is " + str(num_var))
print("The current value of char_var is " + char_var)
print("The current value of bool_var_1 is " + str(bool_var_1))
print("The current value of bool_var_2 is " + str(bool_var_2))
```

```
print()
```

```
num_var = 7
char_var = 'B'
bool_var_1 = False
bool_var_2 = True
```

```
print("The current value of num_var is " + str(num_var))
print("The current value of char_var is " + char_var)
print("The current value of bool_var_1 is " + str(bool_var_1))
print("The current value of bool_var_2 is " + str(bool_var_2))
```

### OUTPUT:

```
The current value of num_var is 5
The current value of char_var is a
The current value of bool_var_1 is True
The current value of bool_var_2 is False
```

```
The current value of num_var is 7
The current value of char_var is B
The current value of bool_var_1 is False
The current value of bool_var_2 is True
```

The spaces around the plus sign are not strictly necessary, but they help with readability

Write your code so that your output will look nice, too!

Notice here the use of extra skipped lines to indicate the organization of the code

**mathematics.py**

```
import math

# Triangle area

a = 5.0
b = 6.0
c = 7.0

s = (a + b + c) / 2

area = math.sqrt (s * (s - a) * (s - b) * (s - c))

print("Side A is", a, "centimeters.")
print("Side B is", b, "centimeters.")
print("Side C is", c, "centimeters.")
print("The area is", area, "square centimeters.")

print()

# Quadratic formula

a = -3.0
b = -7.0
c = 5.0

discriminant = b*b - 4*a*c

root1 = (-b + math.sqrt(discriminant)) / (2 * a)
root2 = (-b - math.sqrt(discriminant)) / (2 * a)

print("Coefficient A is", a, end=".\n")
print("Coefficient B is", b, end=".\n")
print("Coefficient C is", c, end=".\n")
print("Root #1 is", root1, end=".\n")
print("Root #2 is", root2, end=".\n")
```

**OUTPUT:**

```
Side A is 5.0 centimeters.
Side B is 6.0 centimeters.
Side C is 7.0 centimeters.
The area is 14.696938456699069 square centimeters.
```

As you can see here, extra white space, if not excessive, can make your code nicer-looking and easier to read.

Coefficient A is -3.0.  
Coefficient B is -7.0.  
Coefficient C is 5.0.  
Root #1 is -2.906717751485092.  
Root #2 is 0.5733844181517584.