Intro to programming II

http://www.codeskulptor.org/#user40_bZ765G34uqxOunn.py

Week 1 - review

Comments

- Text used for documentation
- A comment is any text that follows a #

Strings

- A sequence of 0 of more characters between single or double quotes
- To print strings we use the function print():

```
print("Hello World!")
>>> Hello World!
print('')              # the empty string
>>>
```

- Strings belong to the type `str`:

```
print(type("hello"))
>>> <type 'str'>
```

- We concatenate strings with the + operator

```
msg = "Hello" + " " + "World!"
print(msg)
>>> Hello World!
```

- We turn numbers into strings using `str()`:

```
my_string = str(5)      # the string "5"
print(my_string)
>>> 5
```

Numbers

The data type of an integer number is `int`

```
print(type(3))
>>> <type 'int'>
```

The data type of a decimal number is `float`

```
print(type(3.0))
>>> <type 'float'>
```

- We turn strings into integers using `int()`:

```
my_integer = int("5")  # the integer 5
print(my_integer)
>>> 5
```

- We turn strings into floats using `float()`:

```
my_float = float("5.0") # the float 5.0
print(my_float)
>>> 5.0
```

Arithmetic operators and expressions:

- Addition (+)
- subtraction (-)
- multiplication (*)
- division (/)
- integer division (//)

- Expressions have the usual precedences

```
result = 1 + 2 * 3     # assign 7 to variable
print(result)
>>> 7
result = (1 + 2) * 3   # assign 9 to variable
print(result)
>>> 9
```

Variables

- A variable is a label that we give to a value
- A variable behaves like the value that it labels

```
print(1 + my_integer)
>>> 6
print("the string " + my_string)
>>> the string 5
```

- We assign a value to a variable using the = sign

- The name of a variable can be any sequence of letters, digits and the underscore _ but it cannot start with a digit.