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**Variables**

variables are like boxes where you can store things(data). There are different kinds of data that you can store like

* int e.g 1, 100, -5, 0
* float e.g 1.123, -0.102
* string e.g "swetha", "", "a long string with spaces and !@!#$%$" (note strings are surrounded with double quotes). This differentiates that it is a string and not a variable.
* bool e.g True, False These are basic data types. There are composite types (list, tuples, set, map) which we will see later.

To store them in a variable use the = (called as assignment operator), and name the variable e.g

i = 1 # this creates a variable named `i` and stores integer value `1`

name="vishnu" # this creates a variable named `name` and stores string value `"vishnu"`

price=10.4 # this creates a variable named `price` and stores flot value `10.4`

The values can be updated with a different value anytime e.g

i = 1 # value stored in i is 1

i = 2 # value stored in i is now 2

i = i + 1 # value i is read which was previously 2. Now adds 1 and stores it back in i. So now value in i is 3

**Data Types**

**Integer**

Integers are whole numbers. There are different operations can be performed on two integers together.

i = 1 + 5 # addition, stores 6 in i

j = 1 - 5 # subtraction, stores -4 in j

k = 5 \* 10 # multiplication, stores 50 in k

l = 10 / 5 # division, stores 2 in l

m = 10 % 5 # modulo/remainder, stores 0 in m (0 is the remainder when dividing 10 by 5)

n = i + j # variables can also be used. their value is operated upon.

**Float**

Floats are numbers with decimal points.

i = 1.5 + 5.0 # addition, stores 6.5 in i

j = 1.5 - 5.5 # subtraction, stores -4.0 in j

k = 5.0 \* 10.0 # multiplication, stores 50.0 in k

l = 9.0 / 5.0 # division, stores 1.8 in l

n = i + j # variables can also be used. their value is operated upon.

**Boolean**

Booleans are true/false values denoted by True and False constants. Note that it doesn't make sense to use arthmetic operations on Booleans.

i = True and True # and operator checks if both are True, True is stored in i

j = True and False # False is stored in j

k = True or True # or operator check if either are True, True is stored in k

l = True or False # True is stored

m = False or False # False is stored

**String**

Strings are a set of characters put together. They are enclosed by double or single quotes.

firstname = "vishnu" # stores the set of characters together in variable name

middlename = "" # stores an empty value in middle.

lastname = "lakshmanan"

full = firstname + lastname # stores "vishnulakshmanan". The operator + means merge two strings together. The result is now stored in variable full

twice = firstname \* 2 # stores "vishnuvishnu". Clones the string 2 times. So the operator \* is used to clone a string.

"hello" + " " + "world" # evaluates to "hello world". You an chain them together. Also note that it is just evaluated and not stored anywhere.