

## Variables:

- One of the most powerful features of a programming language is the ability to manipulate *variables*.
- A variable is a name that refers to a value.
- It is the memory location to stored values.
- Variable assignment using '=' operator.

A variable is a type of **identifier**.

Rules for naming identifiers:

- The first character of the identifier must be a letter of the alphabet (uppercase ASCII or lowercase ASCII or Unicode character) or an underscore (\_).
- The rest of the identifier name can consist of letters (uppercase ASCII or lowercase ASCII or Unicode character), underscores (\_) or digits (0-9).
- Identifier names are case-sensitive. For example, myname and myName are not the same. Note the lowercase n in the former and the uppercase N in the latter.

Examples of valid identifier names are i, name\_2\_3.

Examples of invalid identifier names are 2things, this is spaced out, my-name and >a1b2\_c3.

Python reserves 33 keywords:

```
del          from
elif         global
else         if
except       import
False        in
None         True
nonlocal     try
not          while
or           with
pass         yield
and
as
assert
break
class
continue    finally    is          raise
def          for        lambda     return
```

## Major data types:

- Numbers
- String
- Complex
- List
- Tuple
- Dictionary

```
z=20 #number  
  
x="this is a string" #string  
  
y=[1,2,3,4] #list  
  
p={15,6,7} #tuple  
  
r={a:5} #dictionary
```

## There are three numeric data types:

1. int (integers)
2. float (floating point real values)
3. complex (complex numbers)

```
a=10 # int  
b= 12.6 # float  
c= 5j # complex
```