

Suman IT Technologies

1) Variables in python

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What is variable?

- 1) Variables are containers for storing data values
- 2) Once variable created, some space allocated to store data with reference to variable name.
- 3) We can create variables in python by using equal(=) operator

Like `a = 10`

`'a'` is the variable name

10 is the value stored in variable `'a'`

Syntax to create variables in python

<variable name> = <value>

Example:

```
a = 10
```

```
b = 20
```

Here 'a' and 'b' are variable names and 10 and 20 are values stored in those variable

Create variable in python

```
>>> # lets create a variable in python
```

```
>>> a = 10
```

```
>>> a
```

```
10
```

```
>>> b = 20
```

```
>>> b
```

```
20
```

```
>>> a + b
```

```
30
```

```
>>> c = a + b
```

Multiple assignment

- Multiple assignment can be done in python at a time

```
>>> # multiple assignment
```

```
>>> a=b=c=10
```

```
>>> # 10 is assigned to all variables a, b and c
```

```
>>> a
```

```
10
```

```
>>> b
```

```
10
```

```
>>> c
```

```
10
```

```
>>>
```

Examples:

- 1) Create variable to store number

```
>>> a = 10
```

```
>>> b = 30
```

- 2) Create variable to store string data

```
>>> name = "Badra"
```

```
>>> location = "Hyderabad"
```

- 3) Create variable to store list of data

```
>>> fruit_names = ['orange', 'mango', 'banana']
```

- 4) Create variable to store dict data

```
>>> employee = {"name": "Badra", "age": 29}
```

- 5) Create variable to store tuple data

```
>>> genders = ("male", "Female")
```

- 6) Create variable to store set data

```
>>> numbers = set([1,2,3,4,4,4,4,5])
```

Note: No need to define data type while creating variable in python, python takes care about data type at run time.

Rules to define variable names

- A variable name must start with a letter or the underscore(_) character
- Ex: name = "Badra" or _name = "Badra"
- A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and _)
- Variable names are case-sensitive (age, Age and AGE are three different variables)

Note: Python is a case-sensitive language (means 'a' and 'A' is treated as different char)

#Legal variable names:

```
myvar = "John"
```

```
my_var = "John"
```

```
_my_var = "John"
```

```
myVar = "John"
```

```
MYVAR = "John"
```

```
myvar2 = "John"
```

#Illegal variable names:

```
2myvar = "John"
```

```
my-var = "John"
```

```
my var = "John"
```