

Using Variables and Expressions

Python Identifier

Python Identifiers

- ▶ Names given to various elements of a program such as variables, constants, arrays, and classes in a program are identifiers
- ▶ Rules for defining identifiers:
 - ▶ Begins with a letter
 - ▶ Contains only letters(A to Z) or digits(0-9)
 - ▶ May use underscore(_) to add space in the identifier
 - ▶ Never include any special characters including blank space

Identifiers - II

► Valid identifiers are:

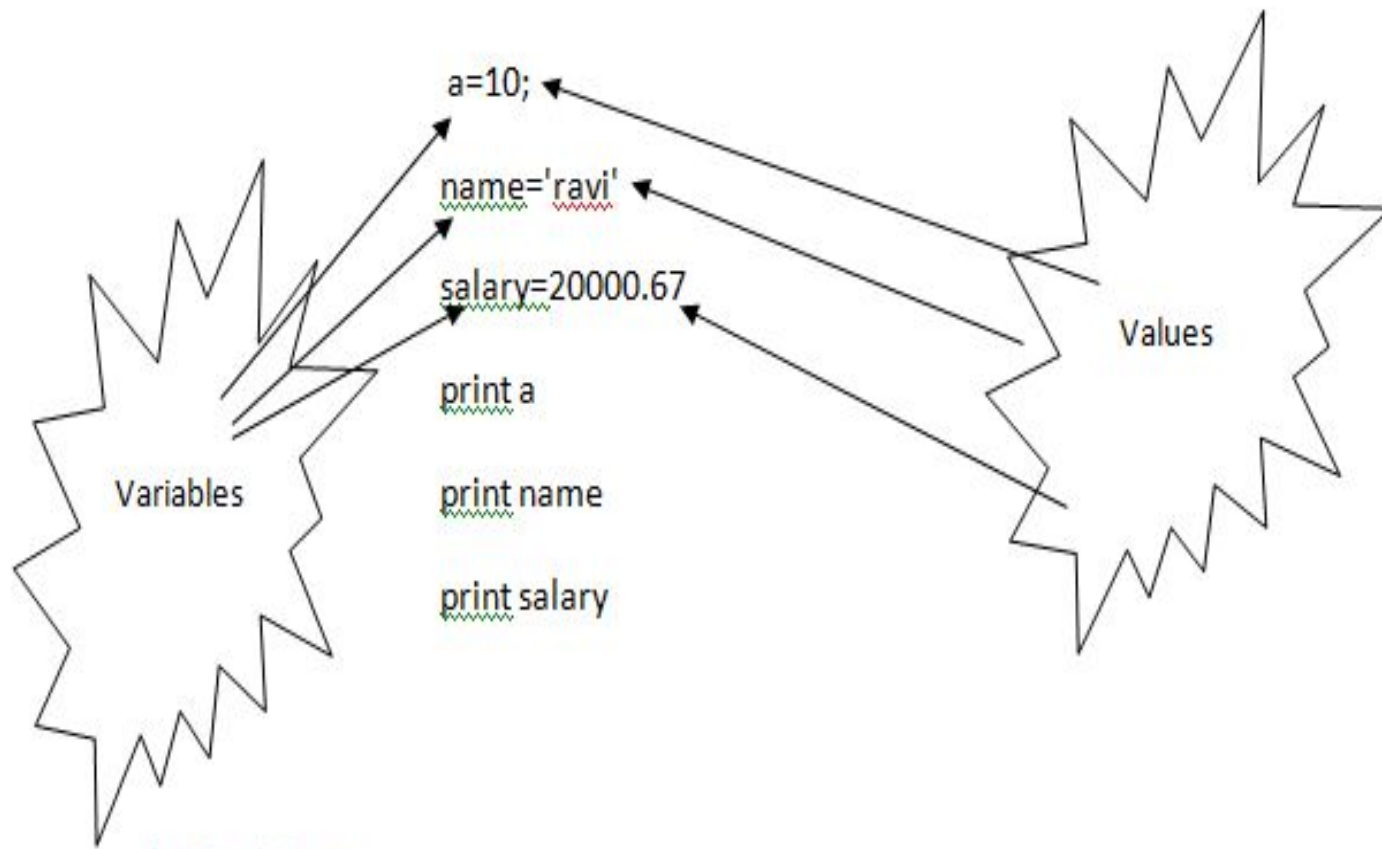
- `Firstnum`
- `Fnum`
- `Firstnum`
- `First18num`
- `FirstNum`

► Invalid identifiers are:

- `first-num`
- `1num`
- `first num`
- `first&num`

Variables

- An identifier whose value keeps changing
- Contains a name and a data type
- Defines the type of data it holds
- Stores user information, intermediate data such as calculated results, and values returned by the functions
- Stores data value in it



- ▶ Any statements with a leading '#' is treated as a comment
- ▶ Literal Constants: Any number or string value
- ▶ variable user defined container that can hold a literal value
- ▶ `a=10` `#variable a contains 10`
- ▶ `b='hello'` `#storing a string 'Hello' in variable b`
- ▶ `c="world"` `#stores a string 'world' in variable c.`

Declaring a Variable

- Syntax for initializing a variable is:

```
variable_name = value
```

Where,

- `variable_name` – Specifies the name of the variable
- `value` – Specifies the value for the variable

Assigning value to a Variable

- Means performing an assignment operation that is placing an equal to (=) sign in between the variable and the value
- Also assigns values of an expressions to it

Example for assigning integer to a variable

- For example, to store an integer value in the variable

```
Salary = 5000;
```

Here, the `salary` variable will be declared as the numeric variable because the value assigned to it is of the integer data type.

Example for assigning string to a variable

- For example, to store string value in the variable

```
message = "HELLO! How are you?"
```

Here, the `message` variable will be declared as the string variable because the value assigned to it is of the string data type. The string is enclosed within the double quotes.

Reserved Words

The following list shows the Python keywords.

and	exec	not
assert	finally	or
break	for	pass
class	from	print
continue	global	raise
def.	if	return
del	import	try
elif	in	while
else	is	with
except	lambda	yield

Example for assigning an expression to a variable

- For example, to store an expression in the variable

```
number1 = 1019
number2 = 126
number3 = number1 + number2
Print(number3)
```

Here, the `number3` variable will be declared as an integer variable and the value of the addition expression is assigned to the variable.

a) Tokens:

- Keywords.
- Identifiers.
- Literals.
- Operators.

Comments

Python supports two types of comments:

1) Single Line Comment:

In case user wants to specify a single line comment, then comment must start with `#`

2) Multi Line Comment:

Multi lined comment can be given inside triple quotes.

eg:

```
"""This  
Is  
Multiline comment """
```