

LOG ON TO ANIMATE CC

CLASS VII
CH-6 PERIOD -3

CHANGING YOUR TOMORROW

OUTCOME OF THE CLASS

- *Operators in Python*
- *Arithmetic operator*
- *String operator*
- *Assignment operator*
- *Relational operator*

ARITHMETIC OPERATOR

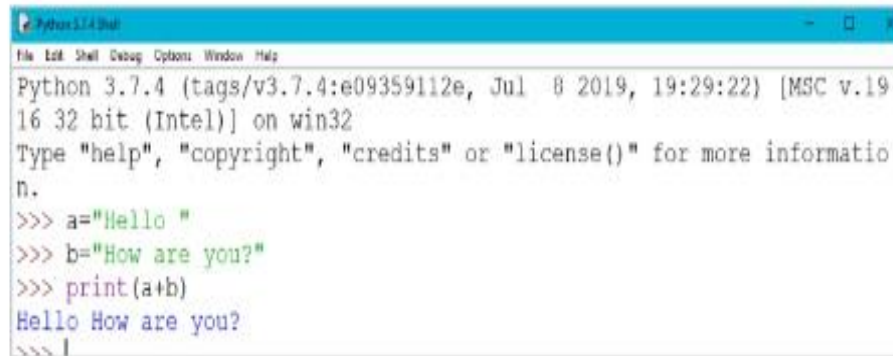
| Operator | Symbol | Usage | Application |
|----------------|--------|---|---|
| Addition | + | To obtain the sum of the values | Value of $13+3.5$ is 16.5 |
| Subtraction | - | To subtract the values | Value of $45 - 35$ is 10 |
| Multiplication | * | To find the product of the data | Value of $6.2*6$ is 37.2 |
| Division | / | To divide the numbers and give an output in the decimal form | <ul style="list-style-type: none"> Value of $5/2$ is 2.5 Value of $-5/2$ is -2.5 Value of $10.0/3$ is 3.333 |
| Floor Division | // | To divide the numbers and give an output in the integer form | <ul style="list-style-type: none"> Value of $5//2$ is 2 Value of $-5//2$ is -3 |
| Remainder | % | To find the remainder when one value is divided by the other. | <ul style="list-style-type: none"> Value of $3\%2$ is 1 Value of $10\%6$ is 4 Value of $6\%10$ is 6 |
| Exponential | ** | To calculate the power of numbers | <ul style="list-style-type: none"> Value of $2**3$ is 8 |

STRING OPERATOR

STRING OPERATORS

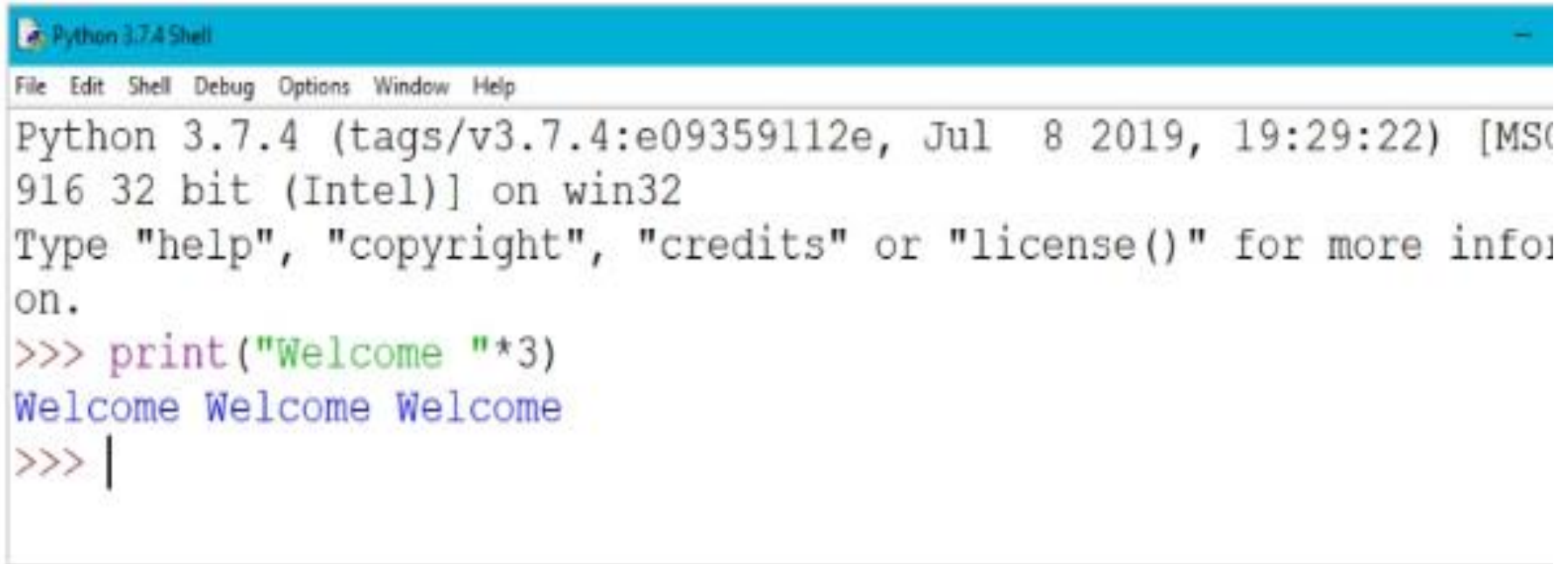
While working with the string values, we may have to perform some operations on them. Python allows only two kinds of operations on string data types. We can either join two strings or replicate a string multiple times. For these two operations, we use '+' and '*' operators on strings respectively. '+' operator is termed as the **concatenation operator** when we use it with strings. It is used to concatenate or join two or more strings.

Program 3:



```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> a="Hello "
>>> b="How are you?"
>>> print(a+b)
Hello How are you?
>>> |
```

Figure 6.3: Concatenation Operator



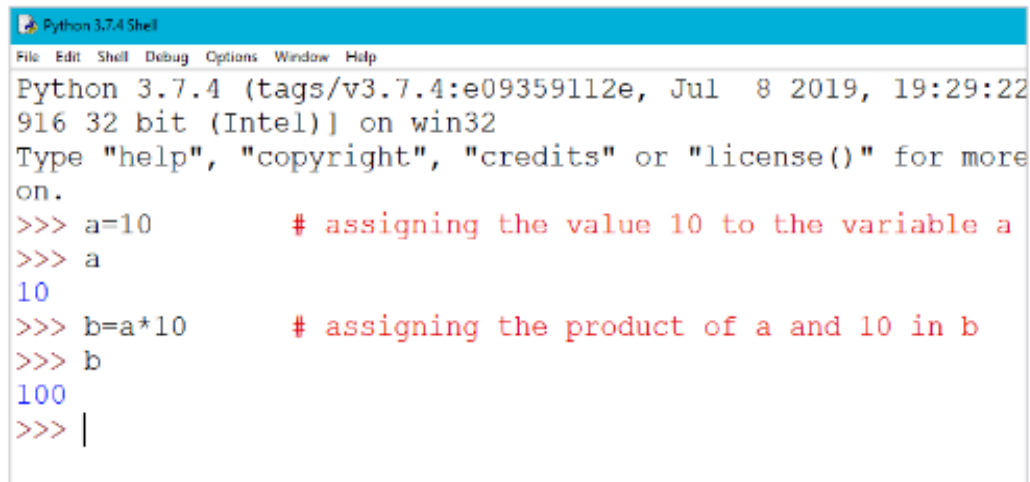
```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSO
916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more info
on.
>>> print("Welcome "*3)
Welcome Welcome Welcome
>>> |
```

ASSIGNMENT OPERATOR

ASSIGNMENT OPERATOR

Assignment operator (=) is used to assign a value to a variable. It assigns the value on its right side to the variable written on the left of it. We have used this operator previously in the programs.

Program 7:



```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22)
916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more
on.
>>> a=10          # assigning the value 10 to the variable a
>>> a
10
>>> b=a*10        # assigning the product of a and 10 in b
>>> b
100
>>> |
```

Figure 6.7: Assignment Operator

In the above example, we have assigned the value 10 to the variable 'a' and then the product of 'a' and 10 is assigned to the variable 'b'.

RELATIONAL OPERATOR

RELATIONAL OPERATORS

Relational Operators are used to show the relationship between operands. These operators compare the values of variables and determine the result in a Boolean expression, which is either **'True'** or **'False'**. Python provides six types of relational operators as shown in the table given below:

| Operator | Format | Expression a=12 b=4 | Result |
|--------------------------|--------|------------------------|--------|
| Less than | < | a<b | False |
| Less than or equal to | <= | a<=b | False |
| Equal to | = = | a= =b | False |
| Greater Than | > | a>b | True |
| Greater than or equal to | >= | a>=b | True |
| Not equal to | != | a!=b | True |

LOGICAL/BOOLEAN OPERATOR

LOGICAL / BOOLEAN OPERATORS

The Logical or Boolean operators evaluate to one of the two states, either **True** or **False**. We use these operators in Python to make comparisons. There are mainly three types of Boolean operators, i.e., **AND**, **OR**, and **NOT**.

| Operator | Example (If a=5 and b=10) | Output | Explanation |
|----------|----------------------------|--|--|
| and | a = 5 and b >= 10 | (a = 5) -> True (b >= 10) -> True | So the result of the expression is True |
| or | a < 5 or b != 10 | (a < 5) -> False (b != 10) -> False | So the result of the expression is False |
| not | not (a != 5) | (a != 5) -> False | So the result of the expression is True |

HOME ASSIGNMENT

- How many types of operator used by Python?
- What is the difference between `//` and `/` operator?
- Explain about relational operator?
- Explain String operator with example?
- What are the logical operator?

THANKING YOU
ODM EDUCATIONAL GROUP