

Class-03: AI-101 | Mastering Boolean, Comparison Operators, Logical Operators and If-else in Python!

[https://github.com/panaversity/learn-modern-ai-python/blob/main/00_python_colab/03_operators_keywords_variables/Agentic AI Python Lesson 03_Operators%2C_Keywords_%26_Variables.ipynb](https://github.com/panaversity/learn-modern-ai-python/blob/main/00_python_colab/03_operators_keywords_variables/Agentic_AI_Python_Lesson_03_Operators%2C_Keywords_%26_Variables.ipynb)

Boolean (bool)

Represents True or False.

```
is_python_fun: bool = True #False

print(type(is_python_fun), " is_python_fun = ", is_python_fun)

result
# <class 'bool'>
```

2. Comparison (Relational) Operators

Used to compare two values.

Operator	Name	Example
==	Equal	5 == 5 → True
!=	Not equal	5 != 3 → True
>	Greater than	5 > 3 → True
<	Less than	5 < 3 → False
>=	Greater than or equal	5 >= 5 → True

Operator	Name	Example
<=	Less than or equal	5 <= 3 → False

Example

✓
0s

▶

my_age = 14
print(my_age == 14)

↔

True

✓
0s

▶

my_age = 14
print(my_age != 14)

↔

False

✓
0s

▶

my_age = 14
print(my_age > 18)

↔

False

✓
0s

▶

my_age = 14
print(my_age > 12)

↔

True

✓
0s

▶

my_age = 14
print(my_age < 12)

↔

False

✓
0s

▶

```
my_age = 14

print(my_age >= 14)
```

↔

True

✓
0s

▶

```
my_age = 14

print(my_age >= 18)
```

↔

False

✓
1s

▶

```
my_age = 28

if ( my_age > 18):
    print("you are allowed")
```

↔

you are allowed

✓
0s

▶

```
my_age = 17

if ( my_age > 18):
    print("you are allowed")
else:
    print ("you are not allowed")
```

↔

you are not allowed

Indication must note before coding run in python means white space

```
x: int = 10
y: int = 5
```

```
print("x == y = ", x == y)  # False, Equal
print("x != y = ", x != y)  # True, Not equal
print("x > y = ", x > y)    # True, Greater than
print("x < y = ", x < y)    # False, Less than
print("x >= y = ", x >= y)  # True, Greater than or equal
print("x <= y = ", x <= y)  # False, Less than or equal
```

```
x == y = False
x != y = True
x > y = True
x < y = False
x >= y = True
x <= y = False
```

input method

```
✓ 6s ▶ name = input ("what is your name?")
      print("hello, " + name + "!")
```

⇒ what is your name?Ali Raza
hello, Ali Raza!

```
▶ name = input ("what is your name?")
  print("hello, " + name + "!")
```

... what is your name?

```
✓ 6s ▶ name = input("what is your name?")
      age = input ("what is your age?")
      print("your name is, " + name + " and your age is," + age)
```

⇒ what is your name?ali raza
what is your age?32
your name is, ali raza and your age is,32

Condition statement

```
▶ age = int(input("enter your age"))

if(age < 18) :
    print("you are minor")
elif (age == 18):
    print("you are young person")
elif (age >= 80):
    print("you are an old person")
else:
    print("you are not adult!")
```

⇒ enter your age32
you are not adult!

⇒ enter your age16
you are minor

⇒ enter your age80
you are an old person

⇒ enter your age18
you are young person

3. Logical Operators

Used to combine conditional statements.

Operator	Name	Example
and	Logical AND	$(5 > 3 \text{ and } 10 > 5) \rightarrow \text{True}$
or	Logical OR	$(5 > 3 \text{ or } 10 < 5) \rightarrow \text{True}$
not	Logical NOT	$\text{not}(5 > 3) \rightarrow \text{False}$

```
▶ age = int(input("enter your age"))
  weight = int(input("enter your weight"))

  if(age < 18) :
    print("you are minor")
  elif (age == 18 and weight <= 80):
    print("you are young person")
  elif (age >= 80 and weight <= 80):
    print("you are an old person")
  else:
    print("you are over weight")
```

```
⇒ enter your age41
   enter your weight89
   you are over weight
```

5



```
age = int(input("enter your age"))  
weight = int(input("enter your weight"))
```

```
if(age < 18) :  
    print("you are minor")  
elif (age == 18 and weight <= 80):  
    print("you are young person")  
elif (age >= 80 and weight <= 80):  
    print("you are an old person")  
else:  
    print("you are over weight")
```



```
enter your age18  
enter your weight80  
you are young person
```

5



```
age = int(input("enter your age"))  
weight = int(input("enter your weight"))
```

```
if(age < 18) :  
    print("you are minor")  
elif (age == 18 and weight <= 80):  
    print("you are young person")  
elif (age >= 80 and weight <= 80):  
    print("you are an old person")  
else:  
    print("you are over weight")
```



```
enter your age90  
enter your weight70  
you are an old person
```



```
age = int(input("enter your age"))  
weight = int(input("enter your weight"))
```

```
if (age < 18 or weight <= 50) :  
    print("you are minor")  
elif (age == 18 and weight <= 80):  
    print("you are young person")  
elif (age >= 80 and weight <= 80):  
    print("you are an old person")  
else:  
    print("you are over weight")
```



```
enter your age19  
enter your weight45  
you are minor
```