

Truthiness of values in Python

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1 Truthiness of values in Python

- In Python every value is having it's own Truthvalue (True / False)
- Every value can be checked for it's Truthiness using bool() function
- integers - Every integer, other than 0 will be treated as True
- floating point values - Every point value, other than 0.0 will be treated as True
- Every sequence type with atleast one value in it will be treated as True
- Empty sequences will be treated as False

```
[1]: if 20 > 10:  
      print('Hi')  
else:  
      print('Bye')
```

Hi

```
[2]: 20 > 10
```

```
[2]: True
```

```
[3]: if 1:  
      print('Hi')  
else:  
      print('Bye')
```

Hi

```
[4]: if -100:  
      print('Hi')  
else:  
      print('Bye')
```

Hi

```
[5]: if 0:  
      print('Hi')  
else:  
      print('Bye')
```

Bye

```
[6]: if 1.456:
      print('Hi')
      else:
      print('Bye')
```

Hi

```
[7]: if 0.00000000000000000000:
      print('Hi')
      else:
      print('Bye')
```

Bye

```
[ ]:
```

```
[8]: if 'hello':
      print('Hi')
      else:
      print('Bye')
```

Hi

```
[9]: if [10, 20, 30]:
      print('Hi')
      else:
      print('Bye')
```

Hi

```
[10]: if []:
      print('Hi')
      else:
      print('Bye')
```

Bye

```
[ ]: int
      float
      sequence type
      str
      list
      tuple
      set
      dict
```

1.1 bool()

- Returns either True or False

Hello

```
[24]: a = True
      b = False
      c = True
      if a and c:
          print('Hi')
      else:
          print('Bye')
```

Hi

```
[25]: a = 'hello'
      b = [0]
      c = ()
      if a and c:
          print('Hi')
      else:
          print('Bye')
```

Bye

```
[27]: print(bool([0]))
```

True

1.2 Single line if else statements

- Syntax
- statement1 if condition else statement2

```
[ ]: a = 10
      b = 4
      if a > b:
          print(a)
      else:
          print(b)
```

```
[28]: a, b = 10, 4
      print(a) if a > b else print(b)
```

10

```
[32]: n = 11
      result = "Even" if n % 2 == 0 else "Odd"
      print(result)
      print(type(result))
```

Odd

<class 'str'>

1.3 Nesting single line if else statements

- Syntax
- stmt1 if condition1 else stmt2 if condition2 else stmt3 if condition3 else stmt 4

```
[33]: a, b, c = 10, 20, 30
      if a > b and a > c:
          print(a)
      elif b > a and b > c:
          print(b)
      else:
          print(c)
```

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```
[34]: a, b, c = 10, 20, 30
      print(a) if a>b and a>c else print(b) if b>a and b>c else print(c)
```

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