



Booleans and Conditional Statements

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Boolean Expressions

Either TRUE or FALSE

Comparison operator (==)

>>>5==5 OR >>> 5 is 5

True

>>>5==6 OR >>> 5 is 6

False

Other Comparisons

Less than <

Less than or equal to <=

Greater than >

Greater than or equal to >=

Not equal to !=

Logical Operations

And, or, not

```
>>>num1 = 5
```

```
>>>(num1 >= 0) and (num1 < 10)    Response – True
```

```
>>>(num1 >= 0) and (num1 < 4)      Response – False
```

```
>>>(num1 >= 0) and not(num1 <10) Response – False
```

Conditional Statements

If-then statements

OR

If-then-else statements

Allow us to execute code based on conditions

Conditional Code

If statement ending in :

- Indent the code to be executed
- End with an extra 'enter'

```
>>>num1 = 5
```

```
>>>if num1<10:
```

```
...     print ('Less than 10')
```

```
...
```

```
Less than 10
```

```
>>> (next line of code)
```


| Conditional Statement With Else

```
>>>If num1 < 10:  
...     num2 = num1 *10  
...     else:  
...         num2 = num1  
...  
>>>print (num2)  
50
```

Multiple Conditions

Multiple if–else–else statements

```
>>> if num1 < 5:  
...     print ('Less than 5')  
... else:  
...     if num1 == 5:  
...         print ('Equal 5')  
...     else:  
...         print ('Greater than 5')  
...  
Equal 5
```


Multiple Conditions

If the conditions have an else followed by if, abbreviate it as 'elif'

```
>>> if num1 < 5:
...     print ('Less than 5')
... elif num1 == 5:
...     print ('Equal 5')
... else:
...     print ('Greater than 5')
```