

# Greater and Less Than

The screenshot shows a web browser with several tabs open. The active tab is 'Greater and less than | Python'. The browser address bar shows 'campus.datacamp.com/courses/intermediate-python/logic-control-flow-and-filtering/ex=3'. The page content includes an 'Exercise' section titled 'Greater and less than' with instructions and a code editor. The instructions state: 'In the video, Hugo also talked about the less than and greater than signs, < and >. In Python, you can combine them with an equals sign: <= and >=. Pay attention: <= is valid syntax, but <= is not. All Python expressions in the following code chunk evaluate to True:'. Below the instructions is a code block with the following code: 

```
1 x < 4
2 x <= 4
3 "alpha" <= "beta"
```

. A note below the code block states: 'Remember that for string comparison, Python determines the relationship based on alphabetical order.' The code editor shows a script.py file with the following code: 

```
1 # Comparison of integers
2 x = -3 * 6
3
4
5 # Comparison of strings
6 y = "test"
7
8
9 # Comparison of booleans
10
```

. The Python Shell shows the prompt 'In [1]:'.

Below is the exercise on 'Greater and Less Than' from the Python course. The image includes the instructions, code, and questions to be answered.

Instructions:

Write Python expressions, wrapped in a `print()` function, to check whether:

1. `x` is greater than or equal to `-10`. (`x` has already been defined for you.)
2. `'test'` is less than or equal to `y`. (`y` has already been defined for you.)
3. `True` is greater than `False`.

Solution:

```
# Comparison of integers
```

```
x = -3 * 6
```

```
print(x >= -10) # Checks if x is greater than or equal to -10
```

```
# Comparison of strings
```

```
y = "test"
```

```
print("test" <= y) # Checks if 'test' is less than or equal to y (alphabetical order)
```

```
# Comparison of booleans
```

```
print(True > False) # True evaluates to 1, and False evaluates to 0
```

Explanation:

1. In the first comparison, we calculate x as  $-3 * 6$ , which is -18. Then we check if  $-18 \geq -10$ . The result is False.

2. In the second comparison, we check if 'test' is less than or equal to y. Since y is also 'test', the result is True as they are equal.

3. The boolean comparison checks if True (1) is greater than False (0), which is True.