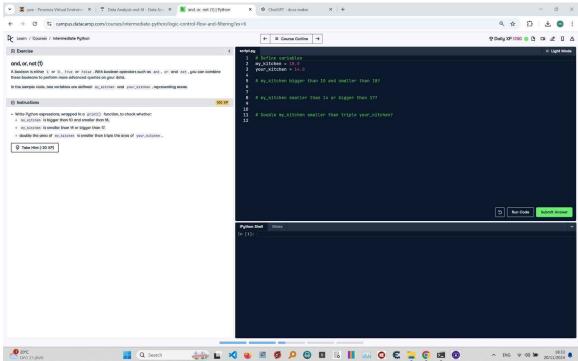
## **Boolean Operators in Python: and, or, not**



\*\*Question:\*\*

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

- 1. `my\_kitchen` is bigger than 10 and smaller than 18.
- 2. `my\_kitchen` is smaller than 14 or bigger than 17.
- 3. Double the area of `my\_kitchen` is smaller than triple the area of `your\_kitchen`.

\*\*Answer:\*\*

Here is the Python code that solves the problem:

# Define variables my\_kitchen = 18.0 your\_kitchen = 14.0

# my\_kitchen bigger than 10 and smaller than 18 print(my kitchen > 10 and my kitchen < 18)

# my\_kitchen smaller than 14 or bigger than 17 print(my kitchen < 14 or my kitchen > 17)

# Double my\_kitchen smaller than triple your\_kitchen
print((my\_kitchen \* 2) < (your\_kitchen \* 3))</pre>

## \*\*Explanation of the Code:\*\*

- 1. \*\*Define variables\*\*: `my\_kitchen` and `your\_kitchen` represent the areas of two kitchens.
- 2. \*\*Logical AND operation\*\*: The first print statement uses `and` to check if `my\_kitchen` is greater than 10 and less than 18, returning `True` only if both conditions are satisfied.
- 3. \*\*Logical OR operation\*\*: The second print statement uses `or` to check if `my\_kitchen` is less than 14 or greater than 17, returning `True` if at least one of the conditions is satisfied.
- 4. \*\*Arithmetic and comparison operation\*\*: The third print statement multiplies `my\_kitchen` by 2 and `your\_kitchen` by 3, then compares them to check if the double of `my\_kitchen` is smaller than the triple of `your kitchen`, returning the result as `True` or `False`.