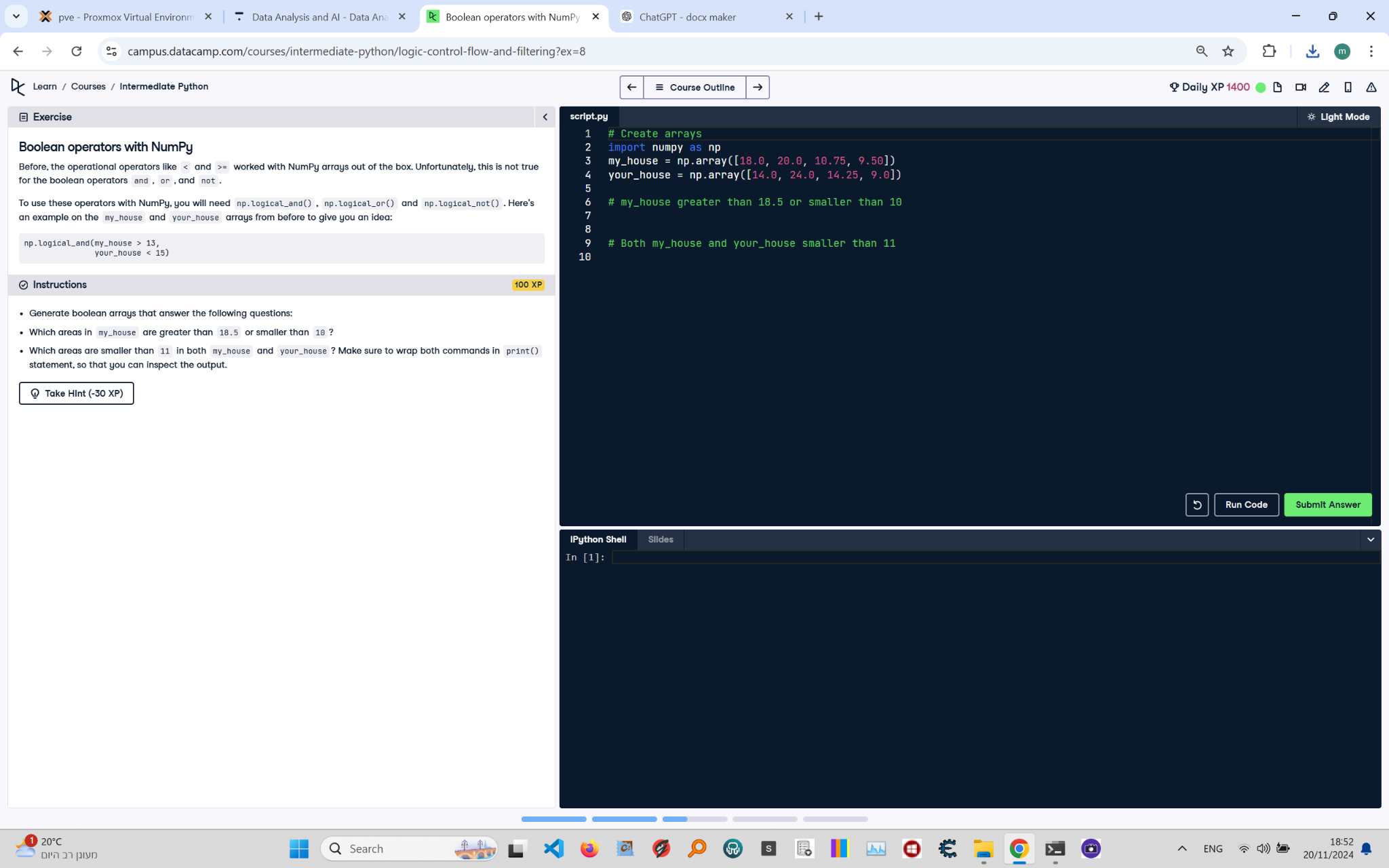
# Boolean Operators with NumPy



\*\*Question:\*\*

Generate boolean arrays that answer the following questions:  
1. Which areas in `my\_house` are greater than 18.5 or smaller than 10?  
2. Which areas are smaller than 11 in both `my\_house` and `your\_house`?  
Make sure to wrap both commands in a `print()` statement so that you can inspect the output.

\*\*Answer:\*\*

Here is the Python code that solves the problem:

# Create arrays  
import numpy as np  
  
my\_house = np.array([18.0, 20.0, 10.75, 9.50])  
your\_house = np.array([14.0, 24.0, 14.25, 9.0])  
  
# my\_house greater than 18.5 or smaller than 10  
print(np.logical\_or(my\_house > 18.5, my\_house < 10))  
  
# Both my\_house and your\_house smaller than 11  
print(np.logical\_and(my\_house < 11, your\_house < 11))

\*\*Explanation:\*\*

1. \*\*Import NumPy\*\*: The `numpy` library is imported to perform operations on arrays.  
2. \*\*Define arrays\*\*: `my\_house` and `your\_house` represent the areas for different rooms in two houses.  
3. \*\*Logical OR operation\*\*: The `np.logical\_or(my\_house > 18.5, my\_house < 10)` checks which areas in `my\_house` are either greater than 18.5 or smaller than 10, returning a boolean array.  
4. \*\*Logical AND operation\*\*: The `np.logical\_and(my\_house < 11, your\_house < 11)` checks which areas are smaller than 11 in both `my\_house` and `your\_house`, returning a boolean array.  
5. \*\*Print results\*\*: The results of both boolean operations are printed for inspection.