

Inner Workings of Lists - Python Exercise

Below is the image provided along with the recreated question, terminal output, and answer:

The screenshot shows a web browser window displaying a DataCamp exercise page. The page title is "Inner workings of lists". The exercise description states: "Some code has been provided for you in this exercise: a list with the name `areas` and a copy named `areas_copy`. Currently, the first element in the `areas_copy` list is changed and the `areas` list is printed out. If you hit the run code button you'll see that, although you've changed `areas_copy`, the change also takes effect in the `areas` list. That's because `areas` and `areas_copy` point to the same list. If you want to prevent changes in `areas_copy` from also taking effect in `areas`, you'll have to do a more explicit copy of the `areas` list with `list()` or by using `[:]`."

The code editor shows the following Python code:

```
1 # Create list areas
2 areas = ['hallway', 'kitchen', 'living room', '
3
4 # Change this command
5 areas_copy = areas
6
7 # Change areas_copy
8 areas_copy[0] = 'hallway'
9
10 # Print areas
11 print(areas)
```

The instructions section says: "Change the second command, that creates the variable `areas_copy`, such that `areas_copy` is an explicit copy of `areas`. After your edit, changes made to `areas_copy` shouldn't affect `areas`. Submit the answer to check this."

The terminal window shows the output of the code:

```
In [1]:
```

Recreated Question and Terminal

Inner Workings of Lists

Some code has been provided for you in this exercise: a list with the name `areas` and a copy named `areas_copy`.

Currently, the first element in the `areas_copy` list is changed and the `areas` list is printed out. If you hit the run code button you'll see that, although you've changed `areas_copy`, the change also takes effect in the `areas` list. That's because `areas` and `areas_copy` point to the same list.

If you want to prevent changes in `areas_copy` from also taking effect in `areas`, you'll have to do a more explicit copy of the `areas` list with `list()` or by using `[:]`.

Instructions:

- Change the second command that creates the variable `areas_copy`, such that `areas_copy` is an explicit copy of `areas`. After your edit, changes made to `areas_copy` shouldn't affect `areas`. Submit the answer to check this.

Corrected Answer

```
# Create list areas
areas = [11.25, 18.0, 20.0, 10.75, 9.50]

# Make an explicit copy of areas
areas_copy = areas[:]

# Change areas_copy
areas_copy[0] = 5.0

# Print areas
print(areas)
```

Explanation of the Corrected Answer

The code uses slicing to create an explicit copy of the `areas` list. `areas_copy = areas[:]` ensures that `areas_copy` is a separate list. Changes to `areas_copy`, like modifying the first element, do not affect the original `areas` list. The original list is then printed to confirm.