

Question: What appliance is above the bananas?



Baseline

Generated Code

```
def execute_command(image, my_fig, time_wait_between_lines, syntax):
    image_patch = ImagePatch(image)
    banana_patches = image_patch.find("banana")
    if len(banana_patches) == 0:
        return image_patch.simple_query("What appliance is above the bananas?")
    banana_patch = banana_patches[0]
    appliance_patches = image_patch.find("appliance")

    if len(appliance_patches) == 0:
        return "no"
    for appliance_patch in appliance_patches:
        if appliance_patch.vertical_center > banana_patch.vertical_center:
            return "yes"
    return "no"
```

Baseline: **yes**



Outputs whether there is an appliance above the bananas

PropTest: **microwave**



Finds the appliance that is above the bananas and returns a name

PropTest

Generated Property Test Case

```
def execute_test(image):
    result = execute_command(image, my_fig, time_wait_between_lines, syntax)
    # Test case 1:
    assert isinstance(result, str), "Expected output to be string."
    # Test case 2:
    assert len(result.split()) in [1, 2], "Expected output to be one or two words"
    # Test case 3:
    assert llm_query(f"Is {result} an appliance?", long_answer = False) == 'yes',
        "Expected output to be an appliance"
    return result
```

Provides extra check signaling that the answer should be an appliance

Generated Code

```
def execute_command(image, my_fig, time_wait_between_lines, syntax):
    image_patch = ImagePatch(image)
    banana_patches = image_patch.find("banana")
    if len(banana_patches) == 0:
        return image_patch.simple_query("What appliance is above the banana?")
    for banana_patch in banana_patches:
        appliance_patches = image_patch.find("appliance")
        for appliance_patch in appliance_patches:
            if appliance_patch.vertical_center > banana_patch.vertical_center:
                # crop would include the appliance so keep it in the query
                return appliance_patch.simple_query("What is the name of the appliance?")
    # If no appliance is above the banana, pick the first appliance
    return appliance_patches[0].simple_query("What is the name of the appliance?")
```