



# CL14: Practice with Lists, Sets, and Dictionaries

# Announcements

- EX03 due *tonight!*
- Submit Quiz 02 regrade requests by 11:59pm tomorrow
- Quiz 03 on Friday
  - Review practice quiz, key, and solutions video
  - Virtual Review Session on Thursday at 6:00pm
  - Please visit Office Hours for help!

# Warm-up: Memory Diagram (to submit to Gradescope!)

```
1  def group_names(names: list[str]) -> dict[str, int]:
2      groups: dict[str, int] = {}
3      first_letter: str
4      for n in names:
5          first_letter = n[0]
6          if first_letter in groups:
7              groups[first_letter] += 1
8          else:
9              groups[first_letter] = 1
10     return groups
11
12     ppl: list[str] = ["Karen", "Emily", "Kris"]
13     output: dict[str, int] = group_names(names=ppl)
14     print(output)
15     output["I"] = 1
16     print(output)
```

# Code-along: Writing a Function that uses a list, set, and dict!

Write a function named `bin_len` that “bins” a list of strings into a dictionary, where the key is an `int` length of a given string and the associated values are a `set` of strings of the key’s length found in the original list.

For example:

`bin_len(["the", "quick", "fox"])` returns `{3: {"the", "fox"}, 5: {"quick"}}`

`bin_len(["the", "the", "fox"])` returns `{3: {"the", "fox"}}`

Before we write any code:

1. What concepts from the course will we need to use?
2. Let’s write this function with pseudocode →

# Pseudocode

Python code