

# References in Python



# Today's Objectives

- Announcements
  - Register to Vote! <https://www.ncsbe.gov/registering/how-register>
  - Hack The Culture - Diversity in Tech Networking - Mon, Oct 12 5:30pm
  - HackNC.com - Student run Hackathon - October 16th-18th
- Check-in with where we are at in the course
  - Quiz Results Discussion
  - Project 1 - Weather Stats
- Practice Diagraming and Discussion on References

# Resources to Come Discuss the Quiz!

- Office Hours open 43 hours each week
  - See Course.Care for complete schedule
- Tutoring
  - Tuesdays: 6:00 PM - 8:00 PM
  - Wednesdays: 1:00 PM - 3:00 PM
  - Thursdays: 6:00 PM - 8:00 PM

# Project 01 - Weather Stats

- Write a program to process NOAA Weather Station CSV Data
- Due Sunday, October 18th at 11:59pm
- Start EARLY
  - Early deadline for 5% extra credit on project grade: Friday, October 16th
- Posts after lecture!

# Warm-up Speed Round - Respond on [PollEv.com/compunc](https://PollEv.com/compunc)

```
1  """A quick example."""
2
3  from typing import List
4
5  x: float = 110.0
6  y: float = x
7  y = 211.0
8  print(x)
9  print(y)
10
11 a: List[float] = [110.0]
12 b: List[float] = a
13 b[0] = 211.0
14 print(a)
15 print(b)
```

Diagram the execution of the following code listing:

```
1  """Reference type example."""
2
3  from typing import List
4
5
6  def main() -> None:
7      """Entrypoint of program."""
8      a: List[int] = [10, 20]
9      b: List[int] = a
10     b.append(30)
11     print(a)
12
13
14 if __name__ == "__main__":
15     main()
```

```
1 """Reference type Example B."""
```

```
2
```

```
3 from typing import List
```

```
4
```

```
5
```

```
6 def main() -> None:
```

```
7     """Entrypoint of program."""
```

```
8     nums: List[int] = [0, 1]
```

```
9     start: int = 2
```

```
10    stop: int = 3
```

```
11    extend(nums, start, stop)
```

```
12    print(nums)
```

```
13    print(start)
```

```
14
```

```
15
```

```
16 def extend(xs: List[int], start: int, stop: int) -> None:
```

```
17     """Extends a list... maybe?"""
```

```
18     while start < stop:
```

```
19         xs.append(start)
```

```
20         start += 1
```

```
21
```

```
22
```

```
23 if __name__ == "__main__":
```

```
24     main()
```

Diagram the execution of the code listing.

# Submit the last diagram on Gradescope

- We will have some diagramming problems on the next Quiz
- Instructions for scanning from a mobile phone:  
<https://help.gradescope.com/article/0chl25eed3-student-scan-mobile-device>