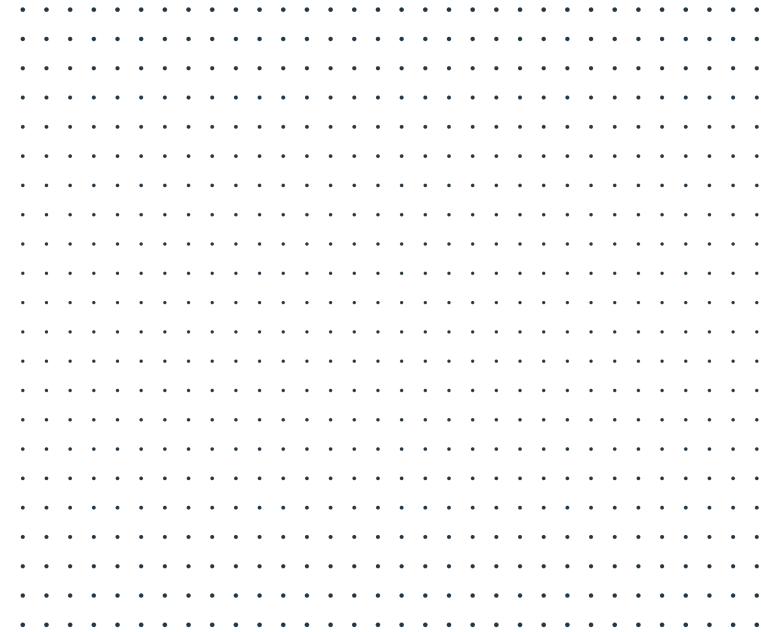


# TECHNICAL CHALLENGE SENIOR PYTHON ENGINEER

---

# Python Tech Challenge

- The challenge is to create a program that computes some basic statistics on a collection of small positive integers. You can assume all values will be less than 1,000.
- Implement this challenge in whatever programming language best highlights your skills. Also, please supply a README with details on how to setup and run your application.

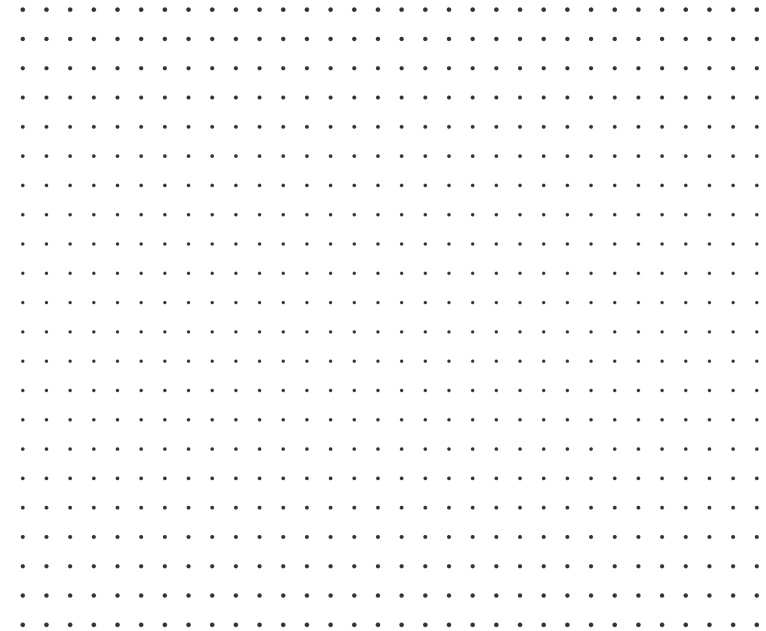


# Requirements

The DataCapture object accepts numbers and returns an object for querying statistics about the inputs. Specifically, the returned object supports querying how many numbers in the collection are less than a value, greater than a value, or within a range.

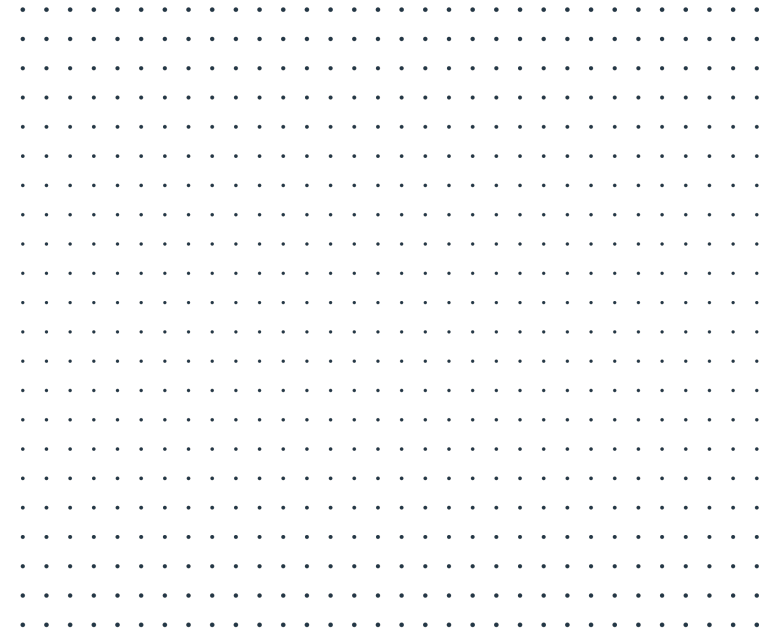
Here's the program skeleton in Python to explain the structure:

```
capture = DataCapture()
capture.add(3)
capture.add(9)
capture.add(3)
capture.add(4)
capture.add(6)
stats = capture.build_stats()
stats.less(4) # should return 2 (only two values 3, 3 are less than 4)
stats.between(3, 6) # should return 4 (3, 3, 4 and 6 are between 3 and 6)
stats.greater(4) # should return 2 (6 and 9 are the only two values greater than 4)
```



## Challenge conditions:

- You cannot import a library that solves it instantly
- The methods `add()`, `less()`, `greater()`, and `between()` should have constant time  $O(1)$
- The method `build_stats()` can be at most linear  $O(n)$
- Apply the best practices you know
- Share a public repo with your project



## PLEASE FOLLOW THE INSTRUCTIONS

- Technical challenge should be completed within the next 3 days.
- Please upload the solution to a repository and share the link to [recruiting\\_CO@teaminternational.com](mailto:recruiting_CO@teaminternational.com)
- If you have questions or inconveniences to complete the test, don't hesitate to ask your recruiter.

