

CSE 121 Lesson 17:

2D Arrays and Array Patterns

Matt Wang

Spring 2024



TAs:	Andy	Anju	Archit	Arkita	Autumn	Christian
	Hannah H	Hannah S	Heather	Hibbah	Janvi	Jessie
	Jonus	Julia	Luke	Maria	Mia	Ritesh
	Shayna	Simon	Trey	Vidhi	Vivian	Gumball?

[sli.do #cse121-17](https://sli.do/#cse121-17)

Today's playlist:
[CSE 121 lecture beats 24sp](#)

Announcements & Reminders

- P3 due **Thursday May 30th** at 11:59pm
- Fun news: for R7, any assignment can be resubmitted
- Final Exam: **Wednesday, June 5th from 2:30-4:20 in KNE 120**
 - [Left-Handed Seating Requests Form](#), closes end-of-day Tuesday, May 28th
 - Next week: focus on hand-writing!
 - (Matt does quick tour of website – prev final exams)

(2D)ays Above Average: `readData()`

How many days' data would you like to input? 3

Next day's data:

Temperature in Seattle? 44

Temperature in Tacoma? 40

Temperature in Bothell? 43

Next day's data:

Temperature in Seattle? 42

Temperature in Tacoma? 40

Temperature in Bothell? 44

Next day's data:

Temperature in Seattle? 42

Temperature in Tacoma? 41

Temperature in Bothell? 43

...



	Seattle	Tacoma	Bothell
1	44	40	43
2	42	40	44
3	42	41	43

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1	44		
2			
3			

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(2D)ays Above Average: `computeAverages()`

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...

The average values for each location were
[42.666666666666664, 40.333333333333336,
43.333333333333336]

	Seattle	Tacoma	Bothell
1	44	40	43
2	42	40	44
3	42	41	43



42.667	40.333	43.333
--------	--------	--------

Average of Seattle
temperatures
 $(44 + 42 + 42) / 3$

(PCM) Common Ideas in Array Patterns

- Loop bounds
- Direction of traversal
- Indexing into an array

(PCM) Your Questions on Arrays! (1/3)

“Can you make a 2D array where each of the arrays are different lengths, or does it always have to be a square?”

(PCM) Your Questions on Arrays! (2/3)

“How can you implement both user inputs and arrays?
The tallying made sort of sense to me, but not enough to know what it does.”

“How do deal with 2D arrays patterns?”

(PCM) Your Questions on Arrays! (3/3)

“Why aren't 2D arrays stored in a matrix like form if that is typically the desired behavior?”