

# CSE 121 Lesson 15: Array Patterns and Exam Review

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Ziao



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# Announcements, Reminders

- **Quiz 2 Feedback** will be released by Monday at the **latest**
  - Tip: Make sure you are reviewing your quizzes when preparing for the final!
- **R6 and R7** released!
  - *Extra Resubmission Cycle – any assignment can be resubmitted for both!*
- Programming Assignment 3 due next Tuesday
- Final Exam: **Friday, 8/16 from 12:00-1:00 in PCAR 290**
  - **See Ed post for more information**
  - **No more make-ups for the final exam**
- Final Reflection feedback deadline **TONIGHT!**

## (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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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]

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1	44	40	43
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42.667	40.333	43.333
--------	--------	--------

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

Questions?

# (PCM) Counting Elements that Meet a Condition

"one"	"two"	"three"	"six"	"seven"	"eight"	"ten"
-------	-------	---------	-------	---------	---------	-------

```
public static int evenLength(String[] list) {  
    int countEven = 0;  
    for (int i = 0; i < list.length; i++) {  
        if (                ) {  
            countEven++;  
        }  
    }  
  
    return countEven;  
}
```

# (PCM) Modifying Elements of an Array

4	8	15	16	23	42
---	---	----	----	----	----

```
public static void clamp(int min, int max, int[] list) {  
    for (int i = 0; i < list.length; i++) {  
        if (                > max) {  
                = max;  
        } else if (                < min) {  
                = min;  
        }  
    }  
}
```



# (PCM) Searching for an Element

"one"	"two"	"three"	"six"	"seven"	"eight"	"ten"
-------	-------	---------	-------	---------	---------	-------

```
public static int indexOfIgnoreCase(String phrase, String[] list) {  
    for (int i = 0; i < list.length; i++) {  
        if (                ) {  
            return                ;  
        }  
    }  
  
    return                ;  
}
```

# (PCM) Shifting Elements

9.6	-88.0	4.815	0.009	7.0184	42.9
-----	-------	-------	-------	--------	------

```
public static void rotateRight(double[] list) {  
    double lastElement = list[list.length - 1];  
  
    for (int i = list.length - 1; i > 0; i--) {  
        list[i] = list[i - 1];  
    }  
  
}
```

# (PCM) Looking at Multiple Elements in an Array

0	1	9	1	0
---	---	---	---	---

```
public static boolean isPalindrome(int[] list) {  
    for (int i = 0; i < list.length / 2; i++) {  
        if (list[i] != list[list.length - 1 - i]) {  
            return false;  
        }  
    }  
  
    return true;  
}
```

# (PCM) Array of Counters or "Tallying"

8 3 0 1 2 2 0 7 2

```
public static int[] numCount(Scanner input) {  
    int[] counts =          ;  
    while (input.hasNextInt()) {  
        int num = input.nextInt();  
  
    }  
  
    return counts;  
}
```