# This is CS50

Week 2

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Preceptor

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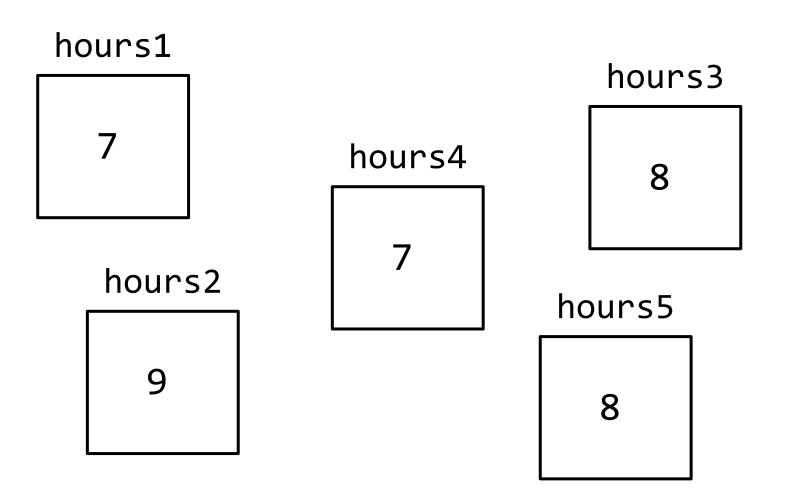
# Agenda

- Arrays
- Strings
- Command Line Arguments, aka CLA

# Arrays

#### good morning \* it's a new day! how was last night?

	now many nours ald you sleep last night?
7.5	
how many	times did you snooze your alarm this morning? * (hint: dont lie! 🏩)
2	
	how was your sleep last night? *
BEST NIG	HT EVER! o good a ehit was okay a not so good adidn't sleep a wink T_T
	your morning mood? *
	what are your goals for today?
be brave, be	bold, and be courageous!
	did you have a dream last night? do you remember it?
record nour c	dream lost plant If you remember :)



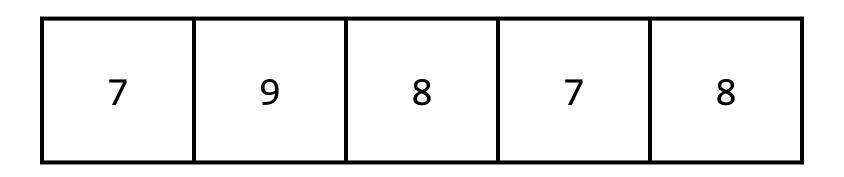
7	9	8	7	8

name



hours

7 9 8 7 8



hours

type (int)

7 9 8 7 8

# int hours[5]; datatype name[size];

;	?	?	
---	---	---	--

# Characteristics

#### size

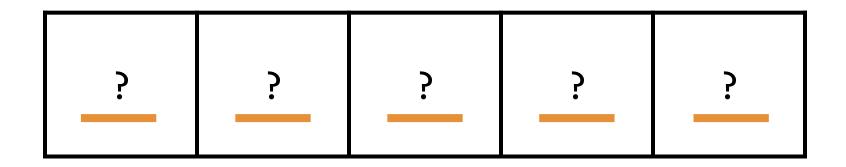
int hours[5];

;	?	?	?
---	---	---	---

# Fixed size

#### type

int hours[5];



# One type

## int hours[5];

?	;	?	?•	?
---	---	---	----	---

# int hours[5];

?	?	?	?	?
a	1	2	3	1

# Zero indexed

```
int hours[5];
hours[0] = 7;
```

7	;	?	?	
0	1	2	3	4

```
int hours[5];
hours[0] = 7;
hours[1] = 9;
```

8	9	;		?
0	1	2	3	4

int hours[5] = {7, 9, 8, 7, 8};
hours

7	9	8	7	8
0	1	2	3	4

## **Array Exercise**

Create an array of size 5 where each element is two times the previous and the first element is 1.

Print the array, integer by integer.

# Strings

string word = "Hello";

```
string word = "Hello";
word
```

	Н	е	1	1	0
_	0	1	2	3	4

string word = "Hello";
word

Н	е	1	1	0	/0
0	1	2	3	4	5

# Array of characters ("chars")

string word = "Hello";
word

Н	е	1	1	0	/0
0	1	2	3	4	5

word[0];

word

Н	е	1	1	0	/0
0	1	2	3	4	5

word[1];

word

Н	е	1	1	Ο	/0
0	1	2	3	4	5

A	В	C	• • •	Z
65	66	67		90

а	b	С	 Z
97	98	99	 122

string word = "Hello";
word

72	101	108	108	111	0
0	1	2	3	4	5

### **Alphabetical Exercise**

Check if a lowercase string's characters are in alphabetical order. If yes, print "Yes". If no, print "No".

asciichart.com

# Command-line Arguments

What are some examples of

programs we've seen that take

command-line arguments?

### \$ make mario

# \$ ./caesar 13

```
int main(void)
{
    ...
}
```

}

int main(int argc, string argv[])

# int argc ——→ ARGument Count

## int argc ——→ ARGument Count

int argc ———→ ARGument Count

string argv[] → ARGument Vector

int argc — → ARGument Count

string argv[] → ARGument Vector

```
$ ./caesar 13

argv[0] argv[1]
```

\$ ./alphabetical hello

```
$ ./alphabetical hello
argv[1]
```

```
$ ./alphabetical abc
argv[1]
```

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