

Welcome to Section!

Code in Place Week 1
April 25, 2024
Lily W

Introductions

- Lily (she/her)
- I teach English at a school in Japan
- Lived in: America (East Coast, Midwest), Taiwan, Hong Kong
- I like crafting! (Recently, knitting, crocheting, and sewing, in that order)





Your turn! Let's share:

1. Name & pronouns
2. What time is it? / Location (if you'd like)
3. What brings you to Code in Place?

Feel free to use the chat! Please let me know if there's anything I can do to make you more comfortable here

Breakout rooms (4 minutes)

1. Name & pronouns
2. Find something you all have in common!
3. What should our section name be?



The screenshot shows a breakout room interface. At the top left is a circular profile picture of a person with dark hair wearing a red shirt. To the right of the photo is the text "Lily Section" with a small edit icon (a square with a pencil). Below this, it says "Section Leader: Lily W". Further down, there is a calendar icon followed by "Thursdays, 6pm" and a clock icon followed by "Next section: April 25th (in 1 day)". On the right side of the interface, there is a vertical stack of four blue buttons: "✓ I can attend April 25th" (with a dropdown arrow), "Join Section Zoom" (with a Zoom icon), "Section Forum" (with a speech bubble icon), and "Email Your Section" (with an envelope icon). The background of the interface features a colorful illustration of people sitting around a table with a red teapot and cups.

What is Section?

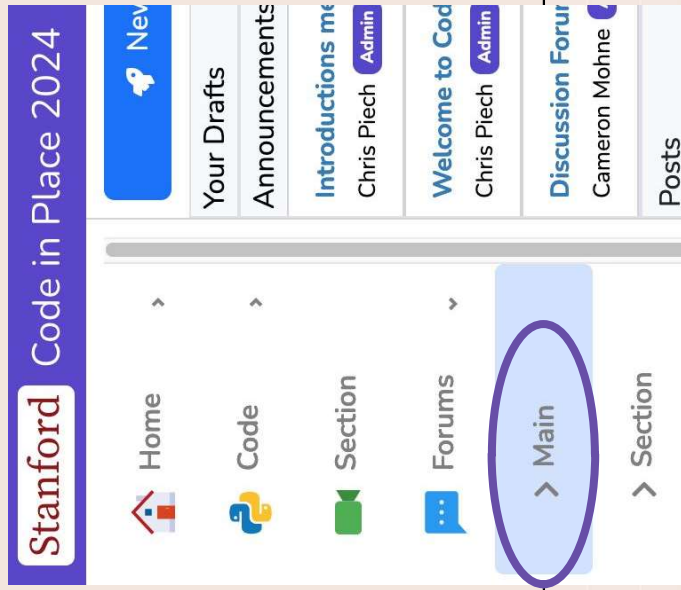


What is section?

- Collaborative session 1x/week
- Review material & ask questions
 - Send a chat or speak up at any time!
- Work through a problem as a team!
 - Focus on the process

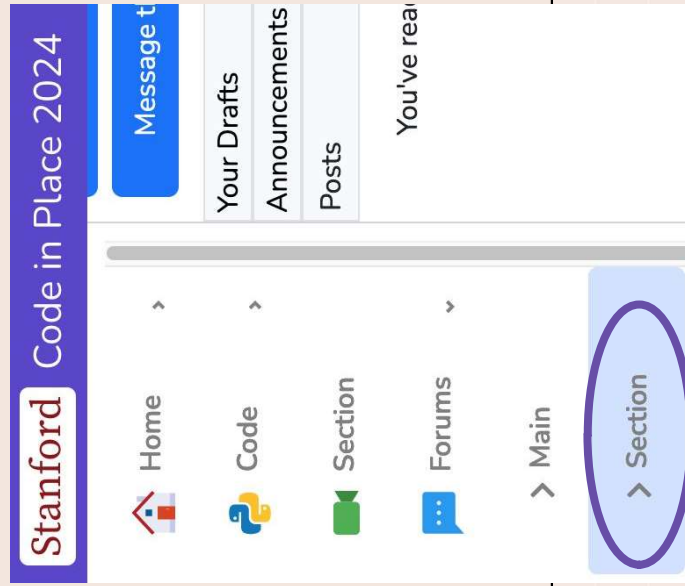
Additional resource: Forums

- Main: All participants & teachers
- Ask questions about Python & the overall course



Additional resource: Forums

- Section: Talk about concepts & section materials in a smaller setting
- Post here with any questions throughout the week!
- Private = only admin can see



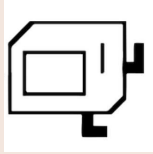
Week 1 Review



What We've Learned

- Karel basics
- Functions
- Control flow: loops & conditional statements

Let's review these concepts...



Karel Basics

- We can power Karel with our code!
- Commands:
 - `move()`
 - `turn_left()`
 - `pick_beeper()`
 - `put_beeper()`

Functions

- Breaking code into smaller, repeatable steps
- Pasta analogy

```
def make_dough():  
    # Code goes here!  
    make_dough()
```



Control Flow



for loop

Definite loop

Repeat code a specific number of times



while loop

Indefinite loop

Repeat code until what's being tested evaluates to false



if statement

Tests for truth

Performs code if condition evaluates to true

for loop

Example definite **for** loop we may use with Karel

```
def turn_right():  
    for i in range(3):  
        turn_left()
```

Runs the code 3 times! Note that **i** begins at 0

while loop

Example indefinite **while** loop we may use with Karel

```
def move_to_wall():  
    while front_is_clear():  
        move()
```

Runs the code until condition becomes false

if statement

Example **if** statement we may use with Karel

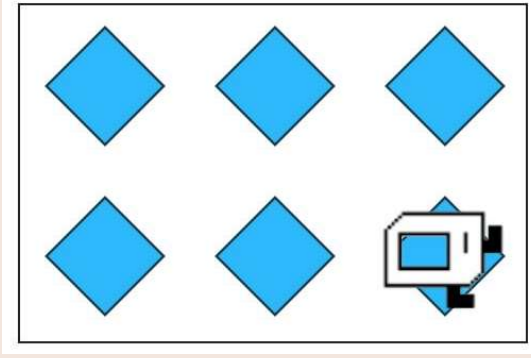
```
def clear_beeper():  
    if beepers_present():  
        pick_beeper()
```

Runs the code if condition is true

Section Problem: Building Hospitals

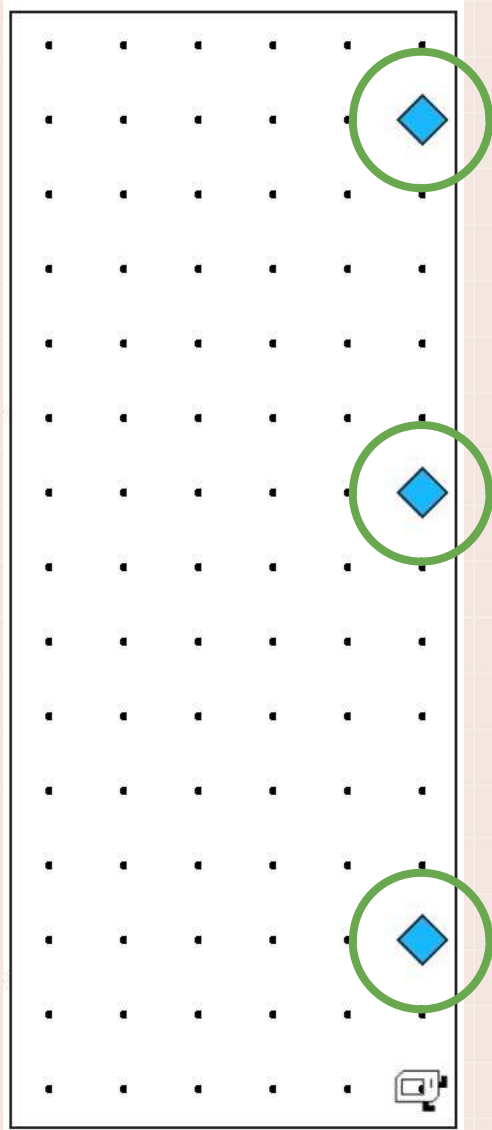
Problem summary

Help Karel travel around the world to build hospitals and treat more people!

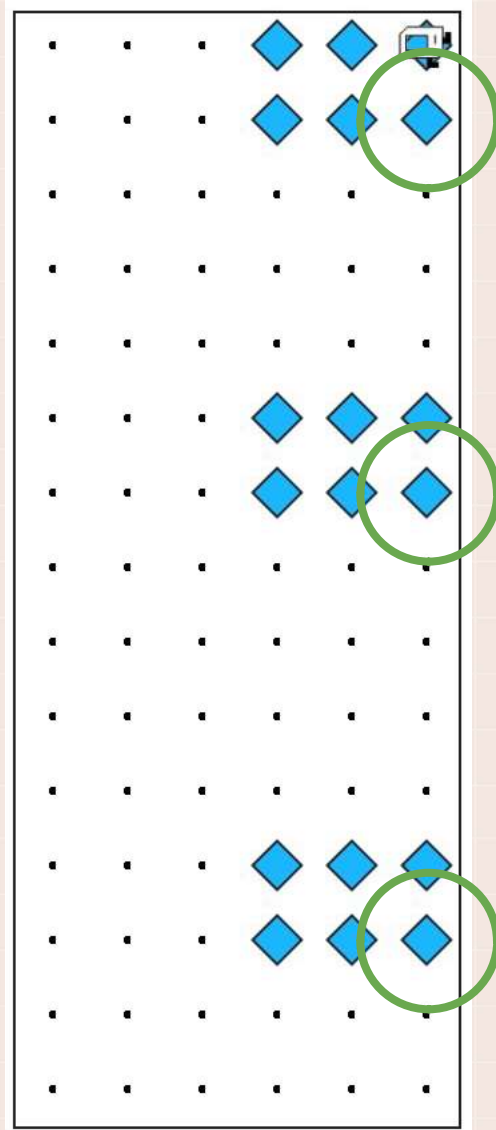



A hospital in Karel's world

**Pre-
condition**



**Post-
condition**





Note

- Karel starts facing east at the bottom-left corner
- Karel has an infinite number of beepers
- Supplies are spaced so that built hospitals will not overlap or hit walls

Any questions?