Recursion

Don’t Repeat Yourself?

or… DO Repeat Yourself!

GENERAL ASSEMBLY

What is recursion?

When a function **calls itself**

CAREFUL!

Infinite loops can happen here too

```
#definition of function
def philosopher():
    print("hmmm...")
    #call the function again
    philosopher()

#call the function initially
philosopher()
```

3 Steps to Recursion

Base case

When the process can stop.

Action

Put that function to work!

Recursive Case

The function is called again, but with the assurance that progress is being made towards the base case

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Example

Code Along

Writing Recursive functions

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Example

Code Along

BUT WHY?

Why should I use recursion instead of a loop?

- Written more **cleanly** and with **less code**
- Useful when problems get **larger** or **complex**

GENERAL ASSEMBLY

Interviews

GENERAL ASSEMBLY

PARTNER EXERCISE: Recursion Exercises

Recursion Exercises

Open the `recursion.js` file.

Implement the required functions by adding the necessary parameters and logic.

https://git.generalassemb.ly/ENT-SDA-SEB-216-IP/SDA-SIRAJ/tree/main/resources/Computer-Science/04.%20Recursion/exercises

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