ES 2: Critical thinking with Python

aka, Introduction to Computing for Engineers

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Tufts
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Logistics for today

Canvas is up, please submit Friday reflection there (due 1/24)

Piazza is up for course Q&A
  Use Piazza for any questions about course content + logistics

Expressions and types

We can use type() to figure out what type something is!

Variables

A variable is just a named storage space for a value.

assignment

```
speed = 5.4
```

"gets"

```
distance = speed * 12
```

Scope of a variable

The parts of the code where a variable "exists" is called its "scope"

A variable is only "in scope" after it has been given a value:

```
distance = speed * 12


speed = 5.4
```

(There are more scope rules, but we'll learn them later!)

IS THAT A LOT?

This is a game we'll play on a regular basis where you try to evaluate something using just your wits.

Rules:
   No internet
   No calculators
   Exact answers are not required

I have a few of these, but please send me more!

IS THAT A LOT?

"At the Coca-Cola company, we've used over
146 thousand tons
of recycled plastic since 2018."

(This was at the end of 2021, so a 4 year span)

Estimates

500 k tons

8% recycled

600 k tons

500 M tons

bottle is 50g

20 bottles / year / person $\Big\}$ 1 kg/ peson

3 billion people

$\Rightarrow$ 3 billion kg

= 3 million tons

GOAL	**GOAL**
Make **100%** of our packaging recyclable globally by 2025	Use at least **50%** recycled content across all packaging materials by 2030
2021 STATUS 90% globally	**2021 STATUS** 23%[1] recycled material in our packaging globally and **13.6%** for PET plastic packaging

GOAL
Bring people together to support a healthy, debris-free environment
2021 HIGHLIGHT Launched global partnership with The Ocean Cleanup™

Coca-Cola 2021 World Without Waste report

In-class work in Codio

Look for Week 01, In-class activities 1 & 2

For Thursday

Reference sections in Codio for types + variables

Friday reflection due on Canvas (on Friday at class time)