CS 1: Introduction to Computer Programming Recitation 5: Objects

In today's syntax recitation, we'll cover various Python objects (Counters, Enums, vpython objects, Fractions)!

Problems

Card Tricks! (topics: Enums)

Create an enum representing the suits of a card (Hearts, Diamonds, Spades and Clubs). Randomly pick one.

1 2	from enum import Enum import random	
3		
4	Suit =	
5		
6	<pre>random_suit = random.choice(</pre>)
7	<pre>print("Randomly selected suit:", random_suit.name)</pre>	

Simulations (topics: Fractions)

Fill in the code to run n simulations with m coin flips each, storing the result of each simulation (number of heads over total flips) in a list of Fractions.



vpython (topics: objects)

Fill in the code to create a sphere and change its position.

```
1 from vpython import sphere, color, vector
2
3 # Create a red sphere at position (1, 2, 0) with radius 0.5
4 ball =
5
6 # Modify the position of the ball to be at position (2, 1, 0)
7  =
```

Count your blessings (topics: Counters)

Fill in the following code to count your blessings. dct should contain all of our blessings, mapped to the number of times that blessing appears in BLESSINGS.

```
1 BLESSINGS: list[str] = ...
 2 dct = {}
 3
   for blessing in BLESSINGS:
 4
 5
 6
 7
 8
9
10
11
12
13
14
15
16
   . . .
```

Now, translate the above code from using a dictionary to using a Counter.

```
1 from collections import Counter
 2
   BLESSINGS: list[str] = ...
 3
 4
 5
 6
 7
8
9
10
11
12
13
14
   . . .
```