Magic 8 Ball

Generating Random Numbers

- Python has a *module* for generating random numbers called... ***`random`***

- Before using functions in the `random` module, you must **import** it:

```
import random
```

- The random module contains *many* functions for generating random numbers.
  - Peruse its documentation! https://docs.python.org/3/library/random.html

- The function we'll use is the **`randint`** function.

```
response: int = random.randint(0, 2)
```

"Let response be a number variable that is assigned the result of calling the random function with the arguments 0 and 2."

- The two numbers we "give" to the **`randint`** function specify the bounds of the random integer generated (a number between 0 and 2, inclusive).
  - At a Python REPL, after importing the **`random`** module, try **`help(random.randint)`**
  - Read its documentation online: https://docs.python.org/3/library/random.html#random.randint

Hands-on: Magic 8-Ball

- Start a new program in the lessons directory named ls09_8ball.py, add the random response variable initialization:

```
import random
question: str = input("Ask a yes/no question...")
response: int = random.randint(0, 2)
```

- Write a nested if-then-else statement that will:

if the **`response`** variable is equal to zero,
then print "Very doubtful"
otherwise,
    if `response` is equal to one, then print "Ask again later",
    otherwise, print "It is certain"

- Check-in on pollev.com/compunc when your program prints one of these 3 messages each time you run it with **python -m comp110.lessons.ls09_8ball**

Repeating a Game

```
is_playing: bool = True

while is_playing:
    question: str = input("Ask a yes/no question: ")
    response: int = random.randint(0, 2)
    is_playing: bool = True
    if response == 0:
        print("Very doubtful")
    else:
        if response == 1:
            print("Ask again later")
        else:
            print("It is certain.")
    # TODO
```

Let's add a loop and a bit of extra logic.

Hands-on: Stopping the Loop

1. Notice the `while` loop's condition is the current value of **`is_playing`**

2. Underneath the TODO, implement the following logic:

3. Assign to **is_playing** the result of asking for **input** "Continue? yes/no " and testing whether the input **str** is equal to "**yes**".

4. Save and test. You should be able to respond "no" and the game stops, "yes" and you can ask another question.

5. Check-in on PollEv.com/compunc and try to think through *why* the loop stops.

Repeating a Game

```
import random

is_playing: bool = True

while is_playing:
    question: str = input("Ask a yes/no question: ")
    response: int = random.randint(0, 2)
    is_playing: bool = True
    if response == 0:
        print("Very doubtful")
    else:
        if response == 1:
            print("Ask again later")
        else:
            print("It is certain.")
    is_playing = input("Play again? yes/no ") == "yes"

print("Have a great day!")
```