CMPSC 100 JANUARY 2021

Platforms cont'd, lists, logic, more basics

COURSE INFORMATION

- Dylan's office hours
  - Thursdays 1 - 3
  - He is present during all class sessions
    - That's kinda Orwellian
- Video from yesterday is "chapterized"
- A Google Meet has been added to the schedule for later during this session
  - This will be dedicated work time

REVISITING A PLATFORM: GITHUB

- Typically, we’d stop right there.
  - Our work is done, it’s saved.
- It’s on the JupyterHub, but it’s not on our course GitHub.
  - It doesn’t count as submitted until it’s on the GitHub.
- The next step will transmit it there.

GITHUB WORKFLOW

```
git add .
```

```
git commit -m “{COMMIT MESSAGE}”
```

```
git commit -m “Saving progress”
```

Think of each of these like “snapshots.”

GITHUB WORKFLOW

```
git push
```

The last step - the submit step.

Essentially a boolean

THE SCARIEST OF DATA TYPES

- Booleans track values of True and False (capitalization matters)
- These are not strings; they are actual values

IF YOU'RE REALLY AFRAID OF THE DARK

```
# if it’s on
light_switch = True

# if it’s off
light_switch = False
```

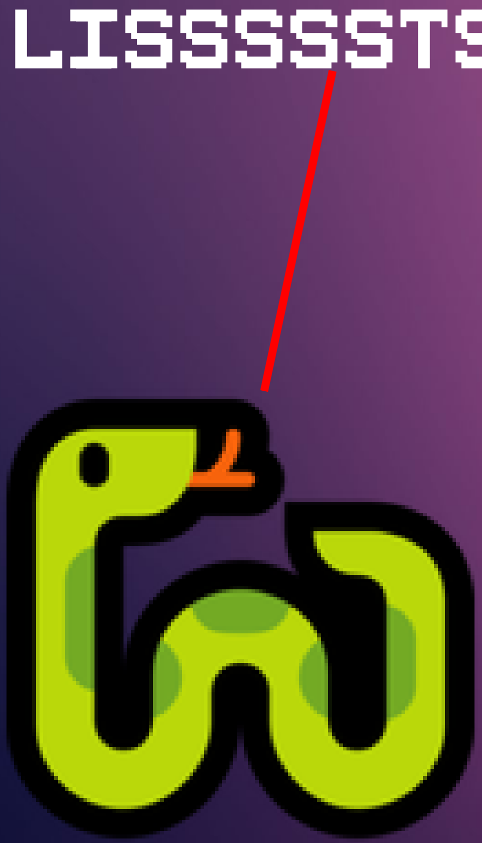
WE CAN DO BETTER THOUGH

```
if light_switch == True:
    print(“Light’s on!”)

if light_switch:
    print(“Light’s on!”)
```

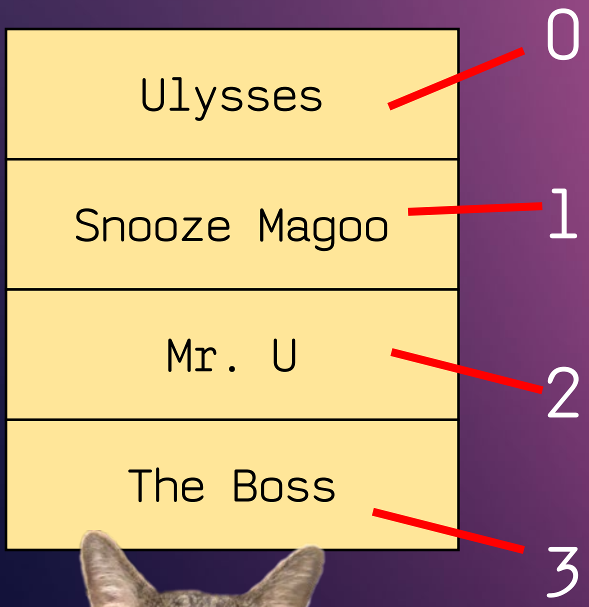
OR EVEN BETTER...

```
if light_switch:
    print(“Light’s on!”)
else:
    print(“Light’s off!”)
```


LISSSSSTS

```
list_name = [0, 1, 2, 3
             4, 5, 6, 7]
```

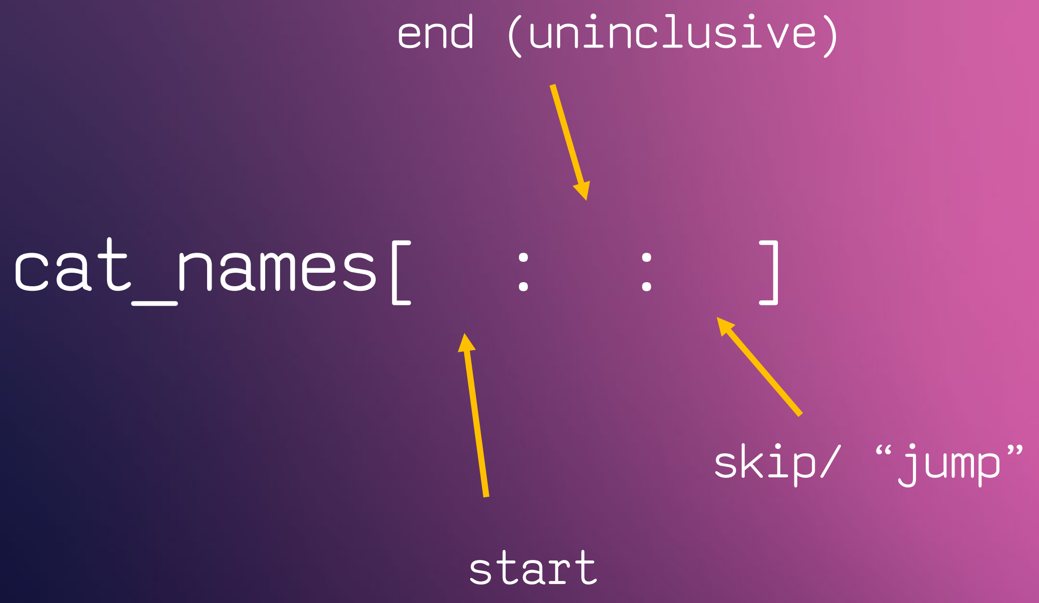
```
cat_names = ["Ulysses", "Snooze Magoo", "Mr. U", "The Boss"]
```



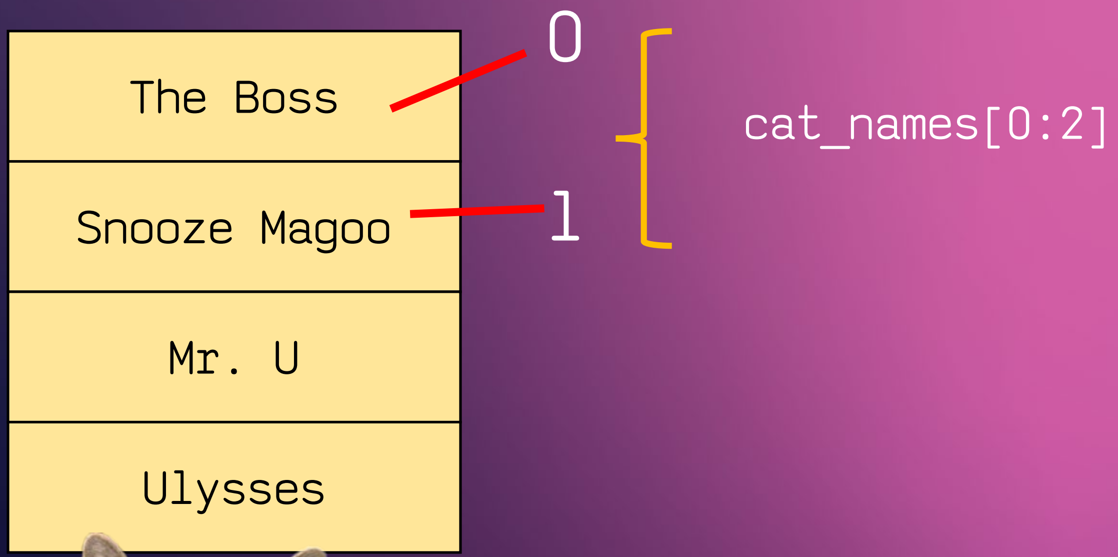
```
cat_names[0]
```

I am soooo gonna
shred your couch
later…

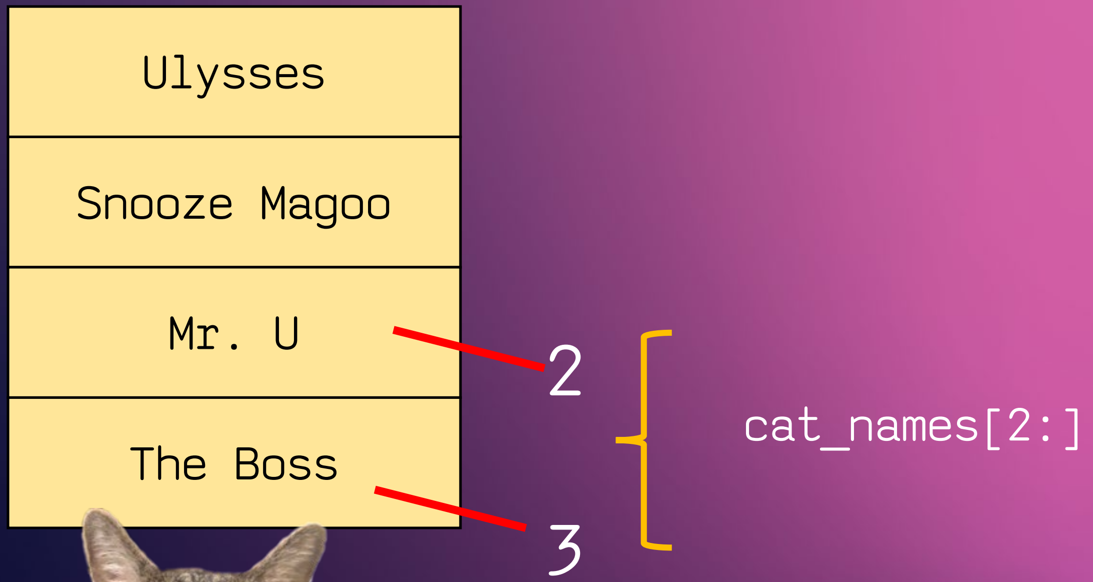
SELECTING PARTS OF LISTS ("SLICING")



```
cat_names[   :   :   ]
```



At least these students know that I am, in fact, The Boss



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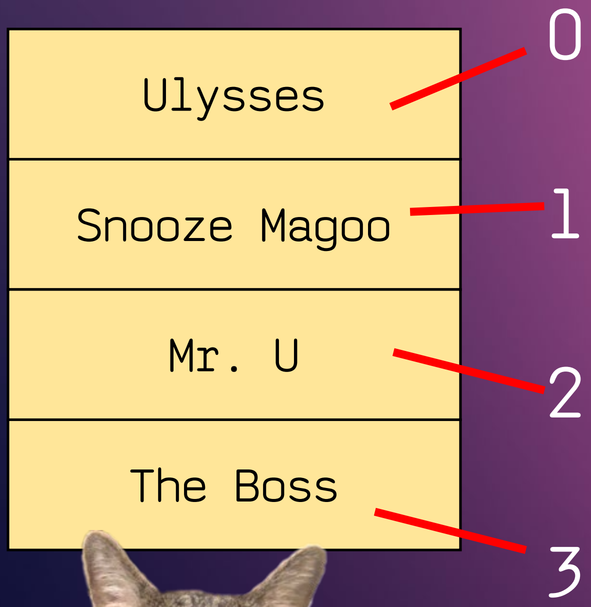
LIST VS. TUPLES

- Lists:
  - are defined by square brackets []
  - can be modified
  - Ideal for values that change
- Tuples:
  - are defined by parenthesis
  - Cannot be modified
  - Ideal for constants
  - Sounds like a breakfast cereal

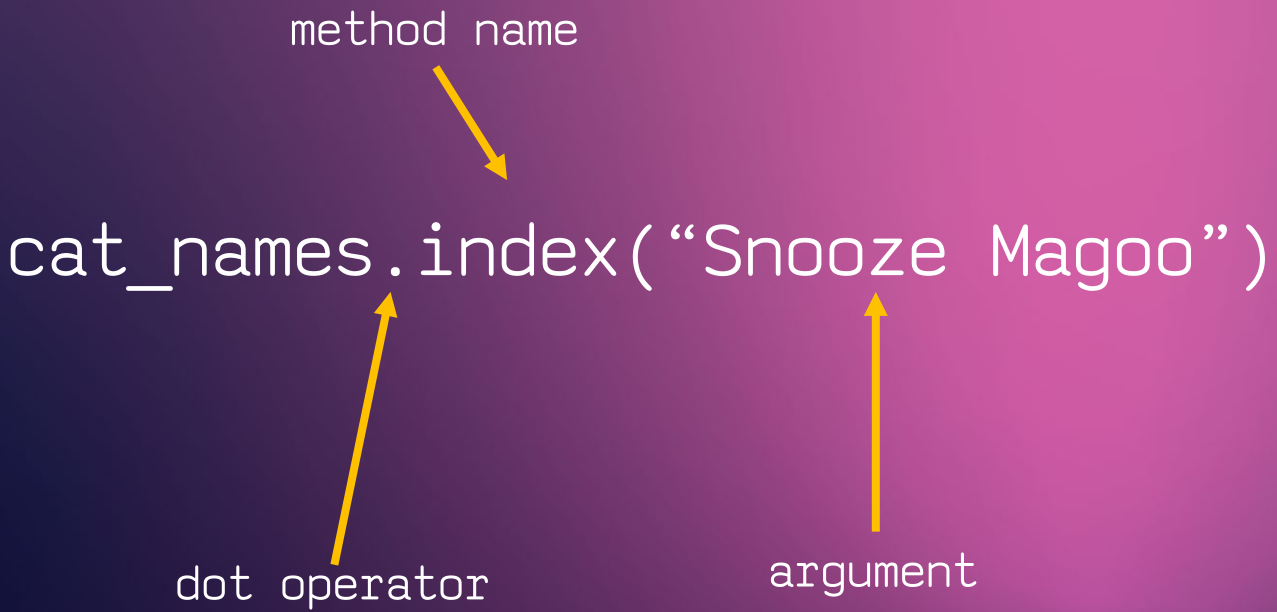
```
cat_names = (“Ulysses”, “Snooze Magoo”, “Mr. U”, “The Boss”)
```



Tuple is a funny name, tho - good one, Prof.

SIGNIFICANT DIFFERENCES

Regular Assignments	Data Structures
number_of_people = 28	names_of_students = [“Prof. Luman”,…]
Single values only, of any data type	Multiple values of any data type
By nature can only be one type	Can “mix-and-match” types
Treated as a single entity (“thing”)	Has indexes that represent “things”
Can’t be “sliced”	Can be “sliced”
If a “primitive” (integer, floating point) no methods (“powers”)	Has methods (“powers”) that it can use to perform special operations



```
cat_names.index(“Snooze Magoo”)
```