INDEX, SLICE AND STRIDE

- We'll cover the index, slicing and stride
- Both **split** and **join** string methods which perform opposing operations.
- Briefly cover the **slice** built-in Python function.
- Membership operator **in**, identity operator **is**, and inverse boolean operator **not**.

INDEXING

```
greet = "Hello World"
greet[0]
```

```
H
```

SLICING

```
greet[6:]
```

```
World
```

STRIDE

```
letters = "abcdef"

letters[1::2]
```

```
'bdf'
```

In [172]:

```
# PAUSE THE VIDEO AND TAKE A MOMENT TO COPY THESE VARIABLES
robot = "technologically"

console_wars = "playstation is superior, xbox inferior!"

code = "p1y2t3h4o5n6i7c8"

words = "I saw a cat jump over the moon and into the clouds"

new_words = "I saw a cow fly over the gates and into the forest"

paid = "I received a total of $5000"
```

In [173]:

```
len(robot)
robot[0:6]
robot[6:]

robot[10:14]
```

Out[173]:

```
'call'
```

In [55]:

```
robot
len(robot)
```

Out[55]:

```
15
```

In [116]:

```
# O = INDEX 5
console_wars.endswith("!")
console_wars[0]

len(console_wars)
console_wars[38]

#COUNTING BACKWARDS
console_wars[-1]
console_wars[15:23]

console_wars[15:-16]
# PLUS 15 = S, AND MINUS 16 = R
```

Out[116]:

```
'superior'
```

In [91]:

```
console_wars
```

Out[91]:

```
'playstation is superior, xbox inferior!'
```

In [119]:

```
console_wars[-24:-16]
```

Out[119]:

```
'superior'
```

In [57]:

```
code
```

Out[57]:

```
'p1y2t3h4o5n6i7c8'
```

In [37]:

```
code.replace("1", "").replace("2", "")
```

Out[37]:

```
'pyt3h4o5n6i7c8'
```

In [62]:

```
code[0:1] + code[2:3] + code[4:5]
```

Out[62]:

```
'pyt'
```

In [64]:

```
code[0::2].upper()
```

Out[64]:

```
'PYTHONIC'
```

In [67]:

```
code[1::2]
```

Out[67]:

```
'12345678'
```

In [76]:

```
code[::-1][0::2]
```

Out[76]:

```
'87654321'
```

In [121]:

```
words = "I saw a cat jump over the moon and into the clouds"
words.split()[3:8]
```

Out[121]:

```
['cat', 'jump', 'over', 'the', 'moon']
```

In [122]:

```
print(words.split())
print()
print(len(words.split()))
```

```
['I', 'saw', 'a', 'cat', 'jump', 'over', 'the', 'moon', 'and', 'into', 'the
', 'clouds']

12
```

In [129]:

```
w_list = words.split()
```

In [137]:

```
w_list[3:8:2]
```

Out[137]:

```
['cat', 'over', 'moon']
```

In [144]:

```
w_list[3:12:2][::-2]
```

Out[144]:

```
['clouds', 'moon', 'cat']
```

In [140]:

```
len(w_list)
```

Out[140]:

```
12
```

In [183]:

```
"cat" in w_list
"cat" not in w_list or "dog" not in w_list
```

Out[183]:

```
True
```

In [182]:

```
"dog" in w_list or "cat" in w_list
```

Out[182]:

```
True
```

In [151]:

```
" ".join(w_list)
```

Out[151]:

```
'I saw a cat jump over the moon and into the clouds'
```

In [167]:

```
pay
pay.split("$")[1]
```

Out[167]:

```
'5000'
```

In [177]:

```
cow = new_words.split()
cat = words.split()
```

In [178]:

```
s1 = slice(3, 12, 2)
```

In [181]:

```
cow[s1]
cat[s1]
```

Out[181]:

```
['cat', 'over', 'moon', 'into', 'clouds']
```