Intro to STRINGS

Remember **Range(start, end, step)** from for loops? The same is used for slicing strings!

Word = “H e l l o _ C o d e w i z !” (Ignore spaces - used to align indexes)
0 1 2 3 4 5 6 7 8 9 10 11 12 13

Word**[start : end : step]**
Word[1] = “e”
Word[1:5] = “ello”
Word[1:5:2] = “el”

Len(string) - Returns the number of characters in the string

count(string) - Returns the number of occurrences of a string
Word.count(“e”)
>>> 2

if “Hello” **in** Word:
    print(“Yes”)
else:
    print(“no”)
>>> Yes

find(string) - Returns the index where the target string starts (or -1 if not found)
Word.find(“H”)
>>> 0
Word.find(“Hello”)
>>> 0

rfind(string) - Same as find() but in reverse, searching backward to front for the first occurrence)
Word.rfind(“e”)
>>> 9
Word.find(“wiz”)
>>> 10

HOW TO SLICE:
guess= “H e l l o ”
string[start : end : step]
guess[1] = “e”
string[1:5] = “ello”
string[1:5:2] = “el”

string.find("A") - first index of an "A" in the string
string.rfind("A") - Same as string.find("A") in reverse
string.find("A", 1) - first index of an "A" in the string starting at index 1 (instead of starting at index 0)
len(string) - how many characters are in the string
string.count("f") - how many "f" in the string

Two Halves:

```
string = input()
middle_index = len(string) // 2
first_half = string[0:middle_index]
second_half = string[middle_index:len(string)]
print(second_half + first_half)
```

Swap Two Words:

```
string = input()
space_index = string.find(" ")
first_word = string[ 0 : space_index ]
second_word = string[ _______ : _______ ]
print(second_word + first_word)
```

First & Last Occurrence:

```
string = input()
count = string.count("f")
if count == 0:
    print(-1)
elif count == 1:
    first_index = string.find("f")
    print(first_index)
else:
    first_index = string.find("f")
    last_index = string.rfind("f")
    print(first_index, last_index)
```

Second Occurrence:

```
string = _______
count = string.count("p")
if count == __:
    print(-2)
elif count == ___:
    print(-1)
else:
    first_index = string.find( "p")
    second_index = string.find( "p" , first_index + 1)
    print(_____________)
```

Remove Fragment:

```
string = input()
first_index = string.find( "h")
last_index = string.rfind( "h")

first_frag = string[0:first_index]
middle_frag = string[first_index:last_index+1]
last_frag = string[last_index+1:len(string)]
middle_frag.replace("h", "H")
print(first_frag + middle_frag + last_frag)
```

Reverse Fragment:

```
string = input()
first_index = _______________
last_index = _______________

first_frag = string[ __  : _____________ ]
middle_frag = string[ _____________ : _____________ ]
last_frag = string[ _____________  : _____________ ]
# Hint: the step should be negative
middle_frag_flipped = string[last_index : first_index: __ ]
print(first_frag + middle_frag_flipped + last_frag)
```

Replace:

```
string = input()
for index in range(len(string)):
  Letter = string[index]
  if Letter == '1':
    print("one", end="")
  else:
    print(Letter, end="")
```

Delete Character:

```
string = input()
for index in range(len(string)):
  if index % 3  == 0:
    print( "" , end="")
  else:
    print(string[index], end="")
```