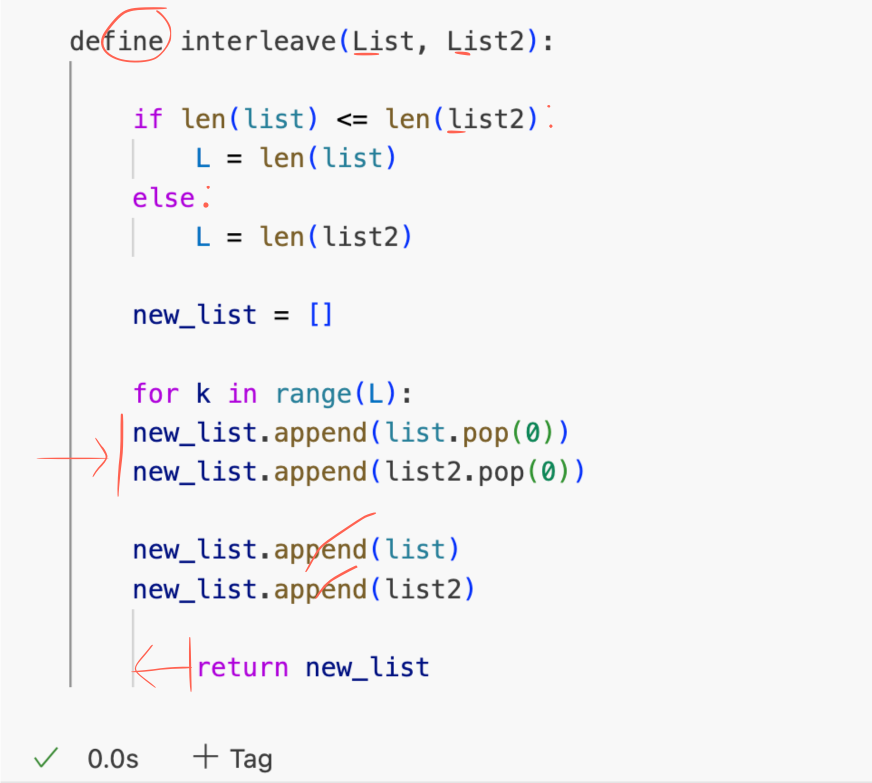
Name______________________________

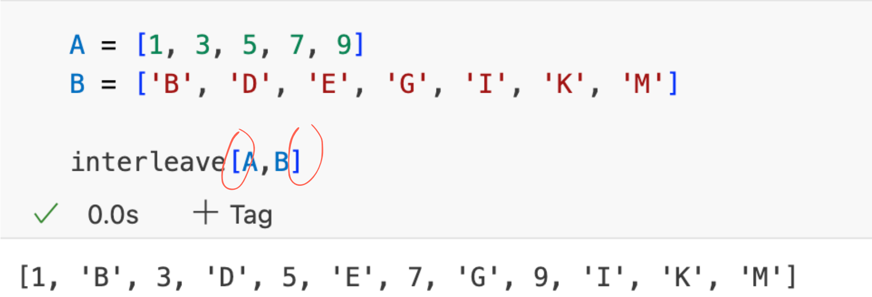
Sec________________

1. Circle and annotate/correct any mistakes you find in the code below:



```
define interleave(List, List2):

    if len(list) <= len(list2)
        L = len(list)
    else
        L = len(list2)

    new_list = []

    for k in range(L):
    new_list.append(list.pop(0))
    new_list.append(list2.pop(0))

    new_list.append(list)
    new_list.append(list2)

        return new_list
```

✓ 0.0s + Tag

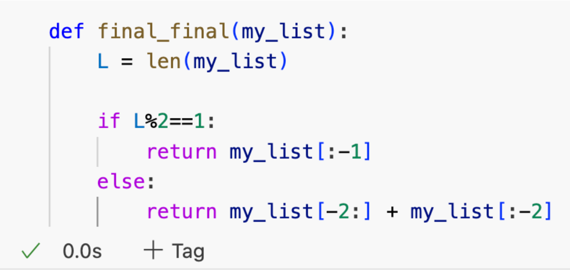


```
A = [1, 3, 5, 7, 9]
B = ['B', 'D', 'E', 'G', 'I', 'K', 'M']

interleave[A,B]
```

✓ 0.0s + Tag

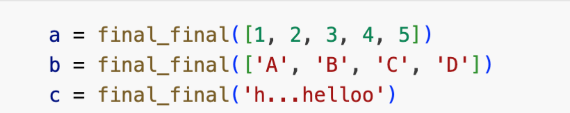
```
[1, 'B', 3, 'D', 5, 'E', 7, 'G', 9, 'I', 'K', 'M']
```

For the next two questions, read the function and figure out what it's doing. Below each function, there are several function calls; write the output for each.



```
def final_final(my_list):
    L = len(my_list)

    if L%2==1:
        return my_list[:-1]
    else:
        return my_list[-2:] + my_list[:-2]
```

2.

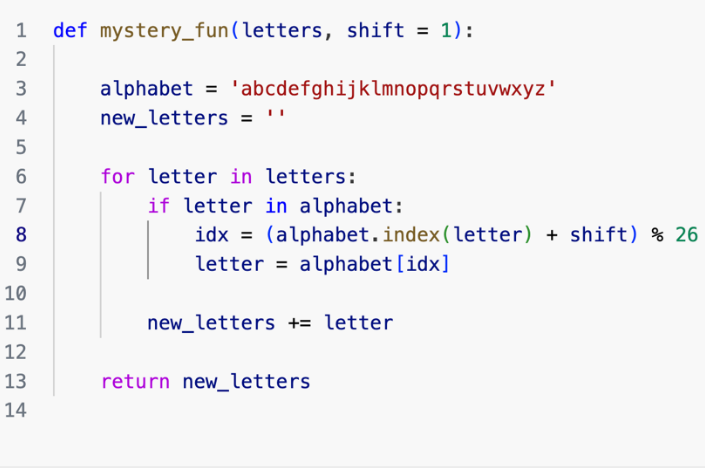


```
a = final_final([1, 2, 3, 4, 5])
b = final_final(['A', 'B', 'C', 'D'])
c = final_final('h...helloo')
```

a ______________________________

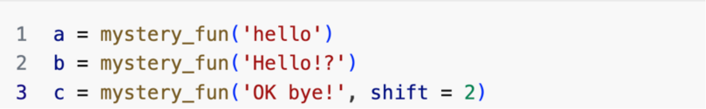
b ______________________________

c ______________________________



```
def mystery_fun(letters, shift = 1):

    alphabet = 'abcdefghijklmnopqrstuvwxyz'
    new_letters = ''

    for letter in letters:
        if letter in alphabet:
            idx = (alphabet.index(letter) + shift) % 26
            letter = alphabet[idx]

        new_letters += letter

    return new_letters

```

3.



```
a = mystery_fun('hello')
b = mystery_fun('Hello!?')
c = mystery_fun('OK bye!', shift = 2)
```

a ______________________________

b ______________________________

c ______________________________

4. Write the function `repeat_by_word()` that takes as input two lists: `word_list` and `repeat_list`. The function should return (not print) a string with each word from `word_list` repeated the number of times specified in `repeat_list` and separated by a space. The string should not end in a space, instead, finish with a ‘!’.

example:

```
words = [‘not’, ‘true’, ‘is’, ‘not’, ‘the’, ‘same’, ‘as’, ‘false’]

repeats = [3, 1, 1, 0, 1, 2, 1, 1]

repeat_by_word(words, repeats)

        → ‘not not not true is the same same as false!’
```

5. Write the function `clip()` that takes as input a list of numbers `num_list` and a pair of values `upper` and `lower`. The function should return a list with the entries of `num_list` except that any number below the lower threshold is replaced by `lower` and any number above the upper threshold is replaced by `upper`.

example:

```
data = [6, 1, 0, 6, 4, 9, 4, 0, 8, 5]

clip(data, upper=6, lower = 1)

      → [6, 1, 1, 6, 4, 6, 4, 1, 6, 5]
```