Practice programming questions:

1.write a programming to Reverse a list without using the reverse() method (use slicing or a loop).

In [2]:
```
# using slicing:
list_name = [11,22,33,44,55]
new_list = list_name[::-1]
print(new_list)
```

```
[55, 44, 33, 22, 11]
```

In [3]:
```
# using loop
my_list = [11,22,33,44,55]
new_list = []
for i in range(len(my_list)-1,-1,-1):
    new_list.append(my_list[i])
print("original list:",my_list)
print("reversed list:",new_list)
```

```
original list: [11, 22, 33, 44, 55]
reversed list: [55, 44, 33, 22, 11]
```

2.Remove all occurrences of a specific element from a list.

In [10]:
```
my_list = [11,22,33,44,55,66,11]
element_to_remove = 11
while element_to_remove in my_list:
    my_list.remove(element_to_remove)
print("list after removing",element_to_remove,":",my_list)
```

```
list after removing 11 : [22, 33, 44, 55, 66]
```

3.write a program to Find the second largest number in a list.

In [31]:
```
my_list = [11,22,55,66,33]
unique_numbers = list(set(my_list))
if len(unique_numbers) < 2:
    print("List doesn't have enough unique elements to find second largest.")
else:
    unique_numbers.sort(reverse=True)
    print("The second largest number is:", unique_numbers[1])
```

```
The second largest number is: 55
```

4.Use list comprehension to create a list of all even numbers between 1 and 20 (inclusive).

In [13]:
```
list_1 = [i for i in range(1,21) if i%2==0]
print(list_1)
```

```
[2, 4, 6, 8, 10, 12, 14, 16, 18, 20]
```

5. Given a list of numbers, use list comprehension to create a new list containing only the numbers greater than 5

In [15]:
```
list_01 = [0,1,56,58,4,14,65]
list__ = [i for i in list_01 if i>5]
print(list__)
```

```
[56, 58, 14, 65]
```

6. Given a list, remove a specific range of elements (defined by start and end indices) using the del keyword and slicing.

In [20]:
```
list_01 = [0,1,56,58,4,14,65]
del list_01[2:5]
print(list_01)
```

```
[0, 1, 14, 65]
```

7. Given a list of words, use list comprehension to create a new list containing the length of each word

In [24]:
```
list_01 = ["Mahesh","Ramu","Suresh","Rishab"]
list_len = [len(i) for i in list_01]
print(list_len)
```

```
[6, 4, 6, 6]
```

8. Write a function that takes a list and a value as input and removes all occurrences of that value from the list in-place.

In [1]:
```
list_001 = [ 2,1,2,2,6,8,9,2]
list__ = [i for i in list_001 if i != 2]
print(list__)
```

```
[1, 6, 8, 9]
```

9. Write a program that takes a string as input, converts it into a list of characters, reverses the list, and then joins the characters back into a reversed string. Print the reversed string.

In [13]:
```
name = "Education"
new_list = list(name)
print(new_list)
new_list.reverse()
reverse_string = " ".join(new_list)
print(reverse_string)
```

```
['E', 'd', 'u', 'c', 'a', 't', 'i', 'o', 'n']
None
n o i t a c u d E
```

10. Write a program that takes a sentence as input. Split the sentence into a list of words. Then, iterate through the list of words and count the total number of vowels (a, e, i, o, u - case-insensitive) in all the words combined. Print the total vowel count.

In [15]:
```
sentence = input("Enter a sentence: ")
vowels = "aeiouAEIOU"
count = sum(1 for char in sentence if char in vowels)
print("Total number of vowels:", count)
```

```
Total number of vowels: 12
```

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