26th April 21

Previous day

- program
- function chaining
- mcq

Python list and tuples

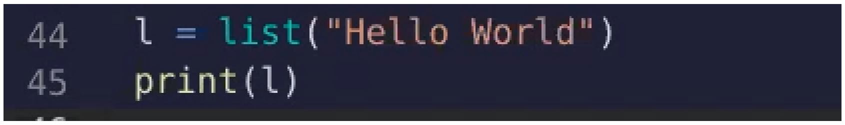
Lecture Flow

- lists()
- split ()
- indexing
- append()
- extend()
- pop()
- remove()
- len()
- nested list
- insert()
- MCQs

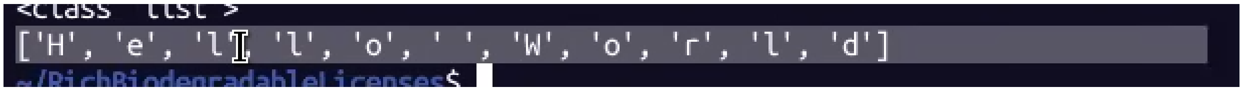
Topics and Explanation

Lists:-

- can have any number of items of any type
- it supports type conversion only from string i.e,. string to list

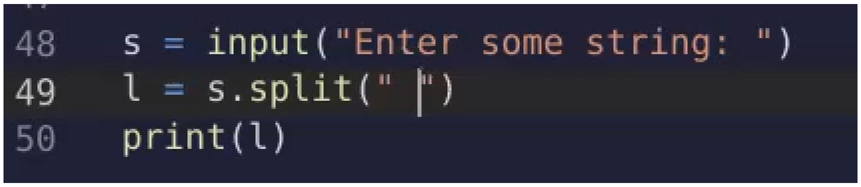


```
l = list("Hello World")
print(l)
```

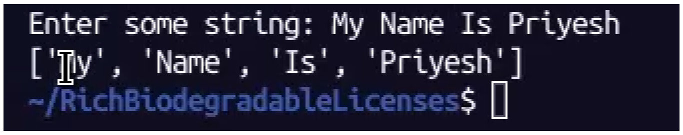


```
<class 'list'>
['H', 'e', 'l', 'l', 'o', ' ', 'W', 'o', 'r', 'l', 'd']
~/RichBiodegradableLicenses$
```

Split() function basically separates the string into various smaller strings depending on the occurrence of one or more characters. Default value for split function is separated by space.

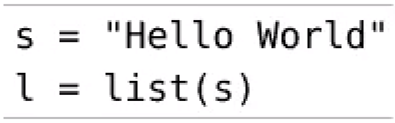


```
s = input("Enter some string: ")
l = s.split(" ")
print(l)
```

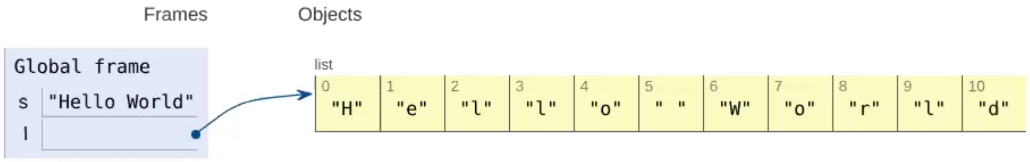


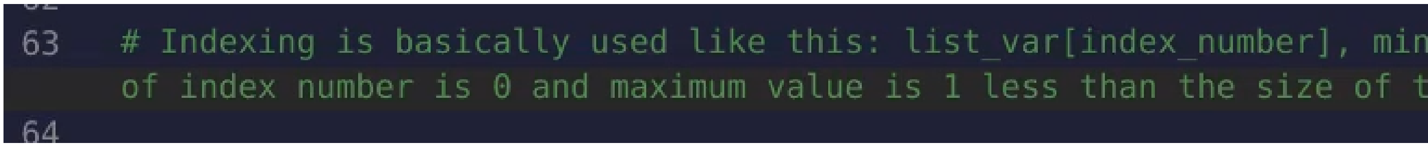
```
Enter some string: My Name Is Priyesh
['My', 'Name', 'Is', 'Priyesh']
~/RichBiodegradableLicenses$ 
```

Indexing : it is basically a system by which you can access individual items of a list. Basically an index is a numbering of each position in a list starting from 0 which can be used to access any item of a list.



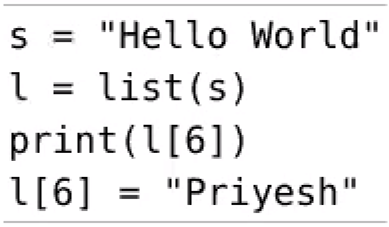
```
s = "Hello World"
l = list(s)
```



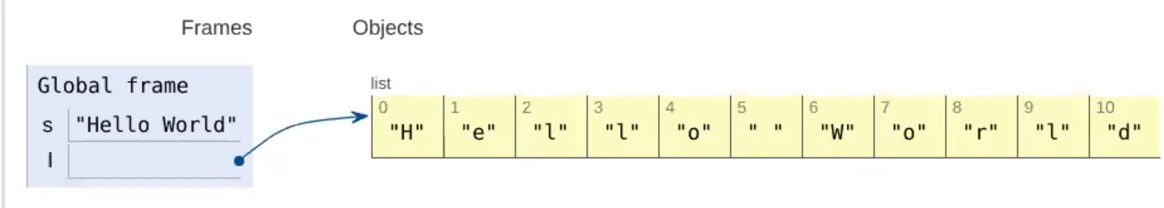


```
# Indexing is basically used like this: list_var[index_number], min
of index number is 0 and maximum value is 1 less than the size of t
```

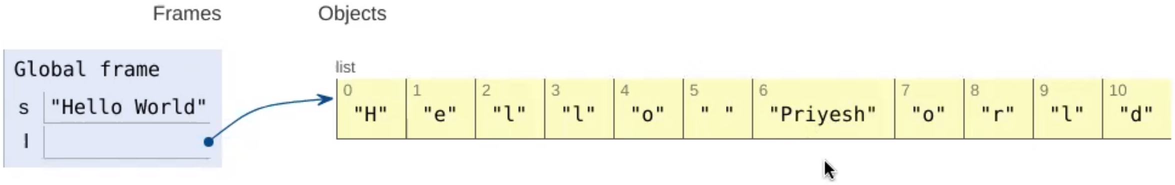
How to replace a string with another string ?



```
s = "Hello World"
l = list(s)
print(l[6])
l[6] = "Priyesh"
```

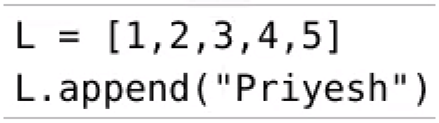


we are using L[6] = “Priyesh” to replace whatever value L[6] has with “Priyesh”

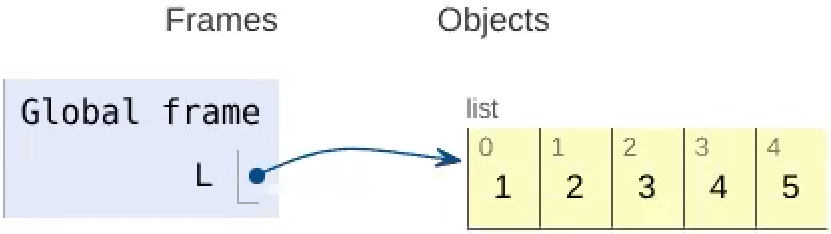


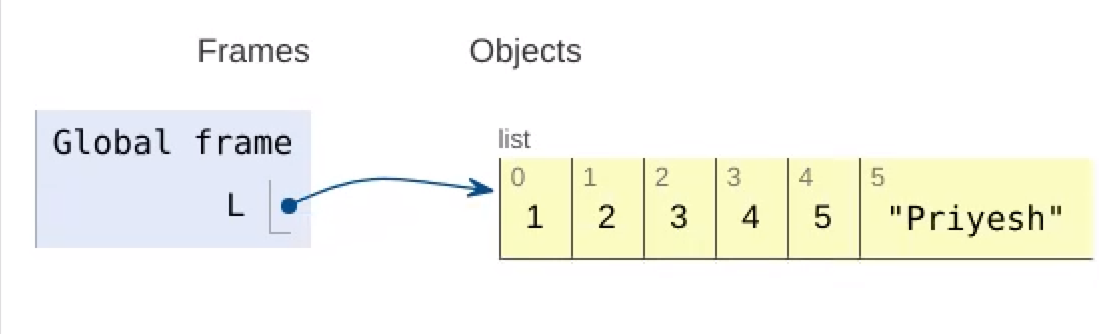
There are functions which can perform in a list

- append() - appends adds an element to the end of the list

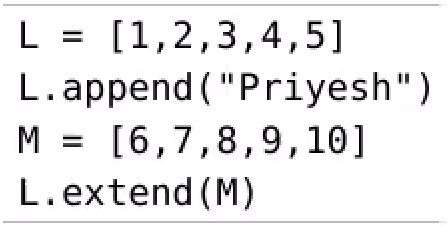


```
L = [1,2,3,4,5]
L.append("Priyesh")
```

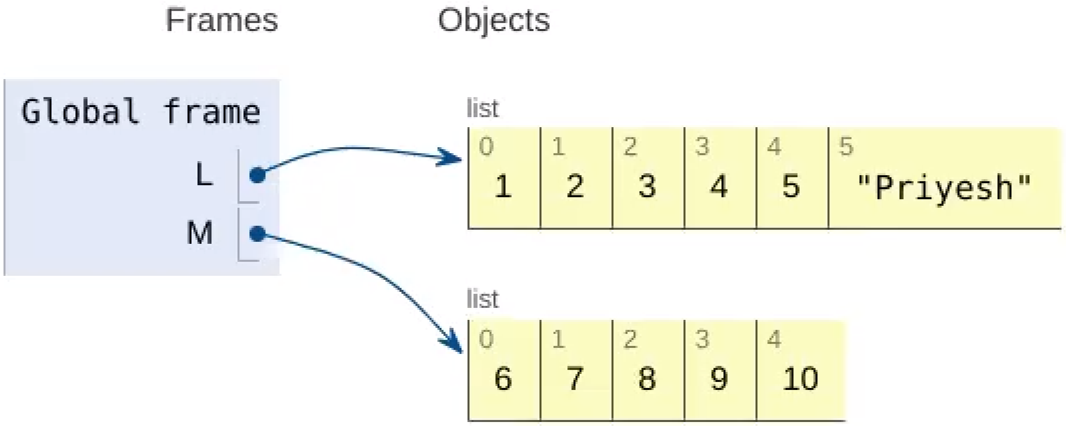


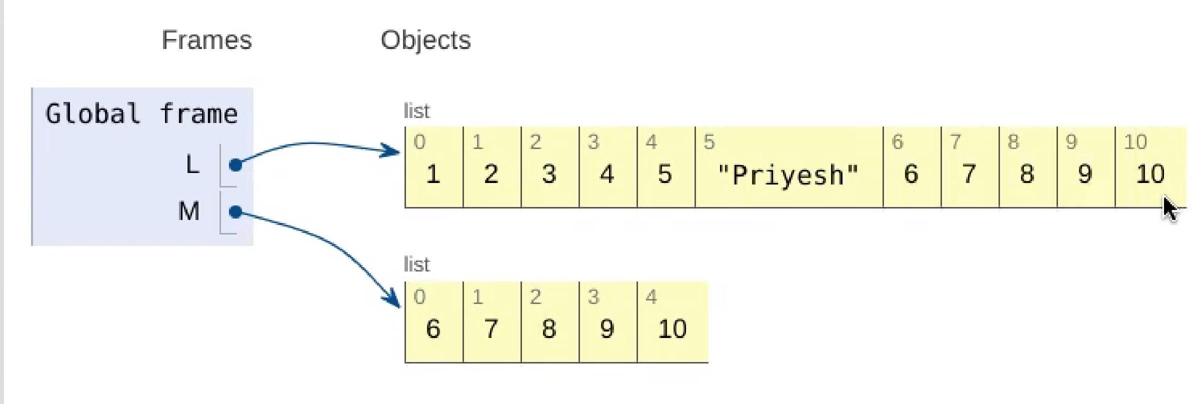


- extend() - extend basically joins the second list to the first list.

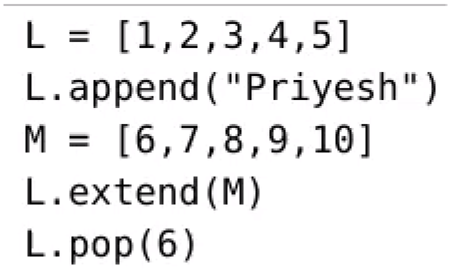


```
L = [1,2,3,4,5]
L.append("Priyesh")
M = [6,7,8,9,10]
L.extend(M)
```

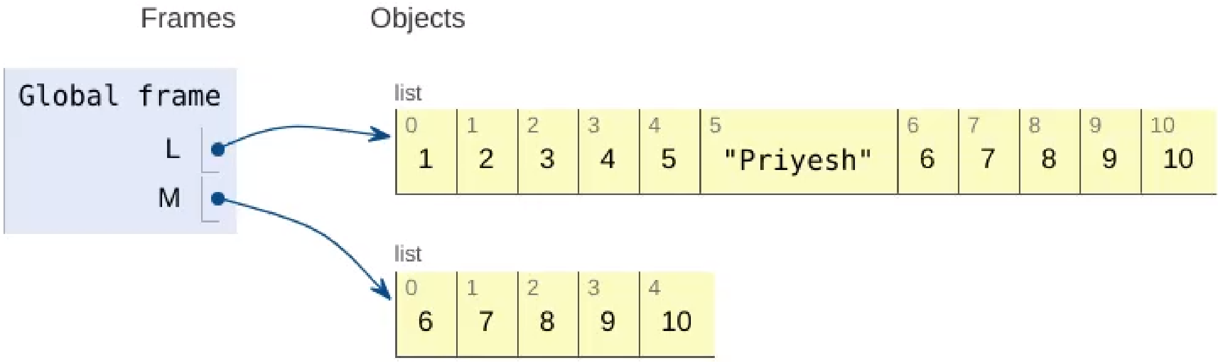


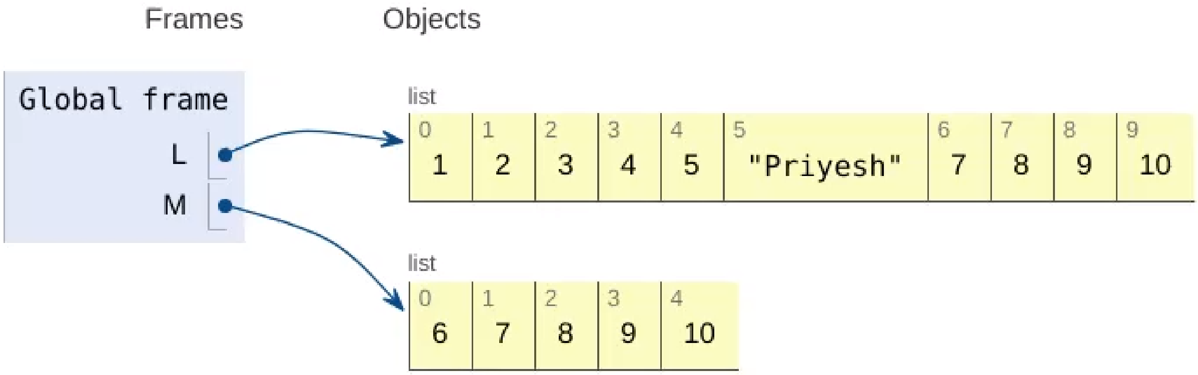


- pop() - pop basically removes the item from a particular index. It takes index number as input from the user and deletes the item at that index.

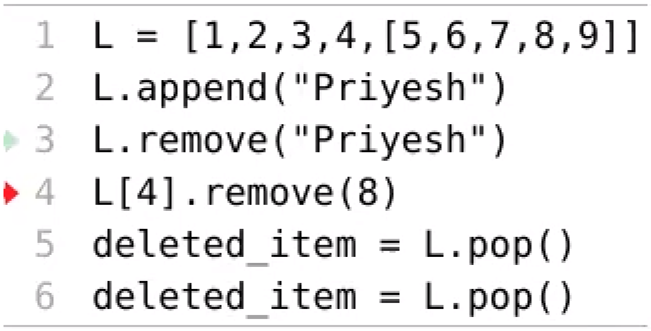


```
L = [1,2,3,4,5]
L.append("Priyesh")
M = [6,7,8,9,10]
L.extend(M)
L.pop(6)
```

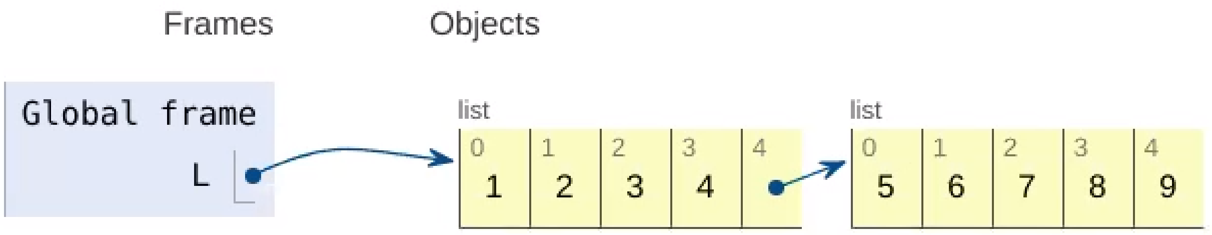


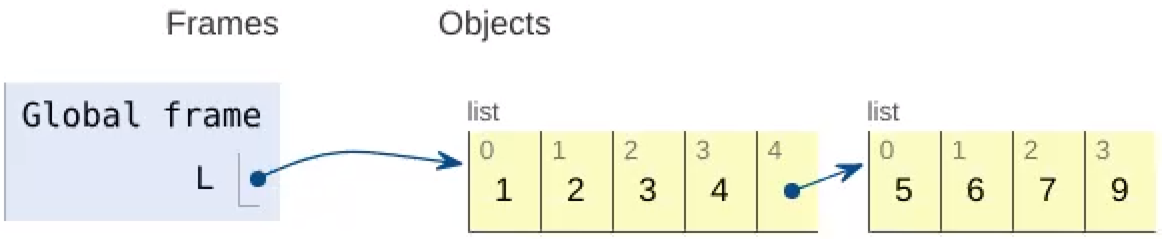


- remove() -



```
L = [1,2,3,4,[5,6,7,8,9]]
L.append("Priyesh")
L.remove("Priyesh")
L[4].remove(8)
deleted_item = L.pop()
deleted_item = L.pop()
```



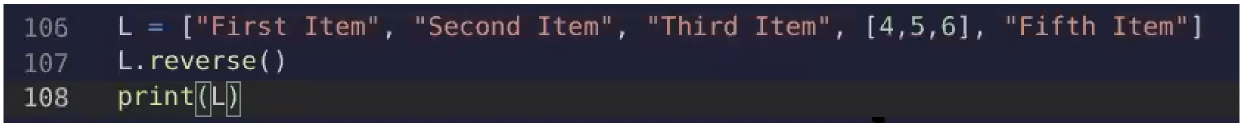


- len() - it prints the size of the a list

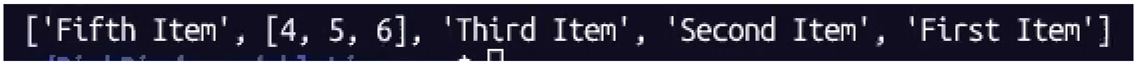
Nested list

any item in a list can be another list. This list will not receive any special treatment from the rest of the items. We can perform an operation on a list, however we can also perform operations on the items of a list.

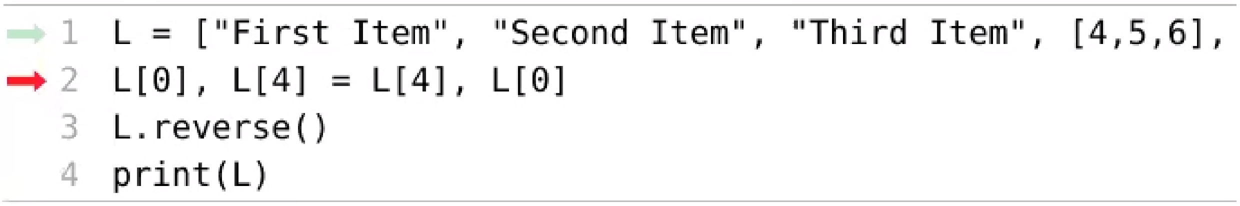
- reveses(): reverses the list



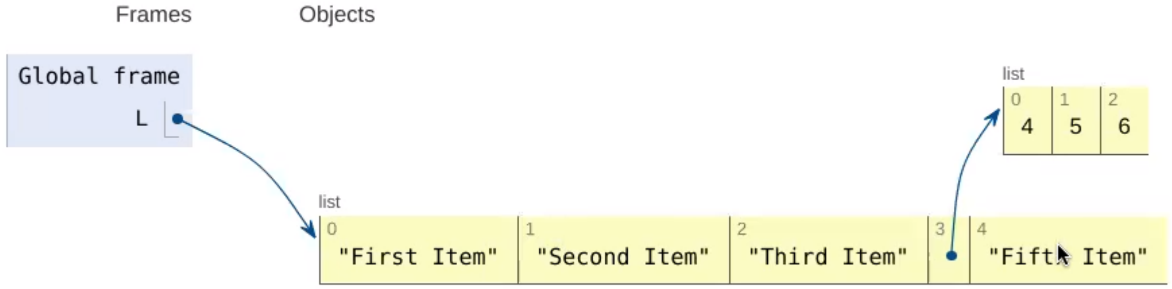
```
L = ["First Item", "Second Item", "Third Item", [4,5,6], "Fifth Item"]
L.reverse()
print(L)
```

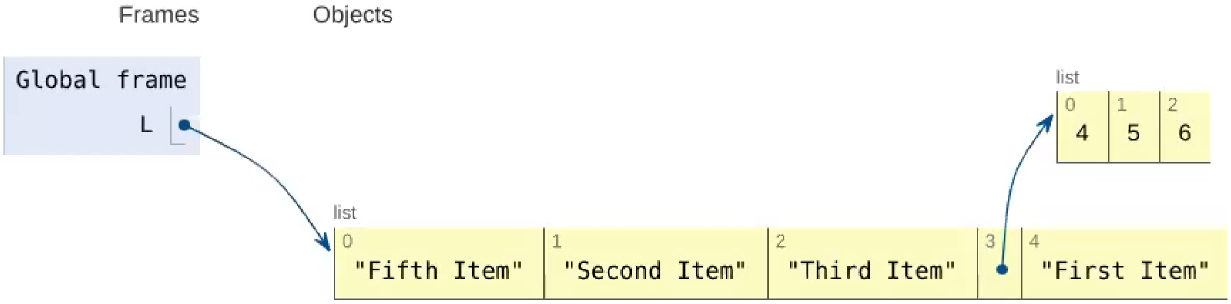


```
['Fifth Item', [4, 5, 6], 'Third Item', 'Second Item', 'First Item']
```

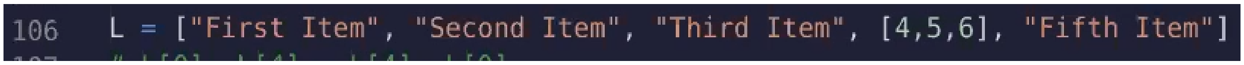


```
L = ["First Item", "Second Item", "Third Item", [4,5,6],
L[0], L[4] = L[4], L[0]
L.reverse()
print(L)
```

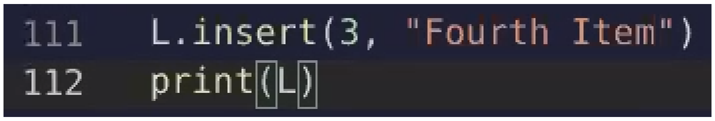




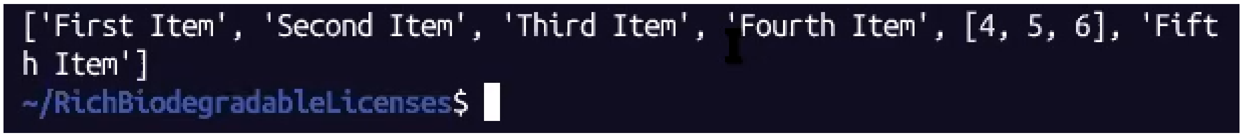
- insert(): Insert function basically inserts a value in a list at a particular index.



```
L = ["First Item", "Second Item", "Third Item", [4,5,6], "Fifth Item"]
```

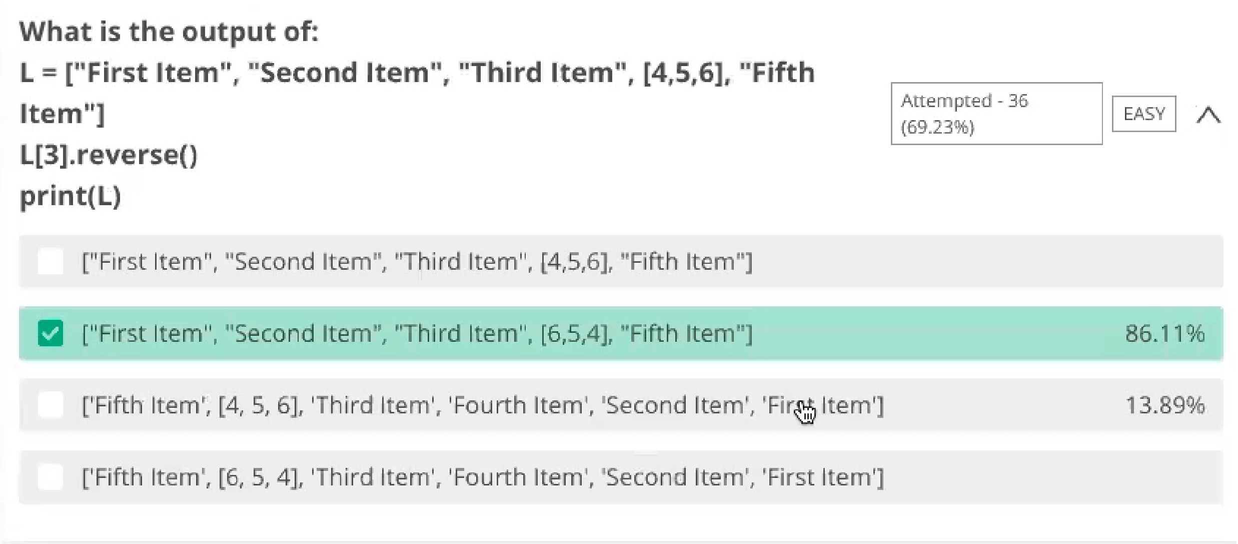


```
L.insert(3, "Fourth Item")
print(L)
```



```
['First Item', 'Second Item', 'Third Item', 'Fourth Item', [4, 5, 6], 'Fift
h Item']
~/RichBiodegradableLicenses$
```

MCQs



What is the output of:
L = ["First Item", "Second Item", "Third Item", [4,5,6], "Fifth Item"]
L[3].reverse()
print(L)

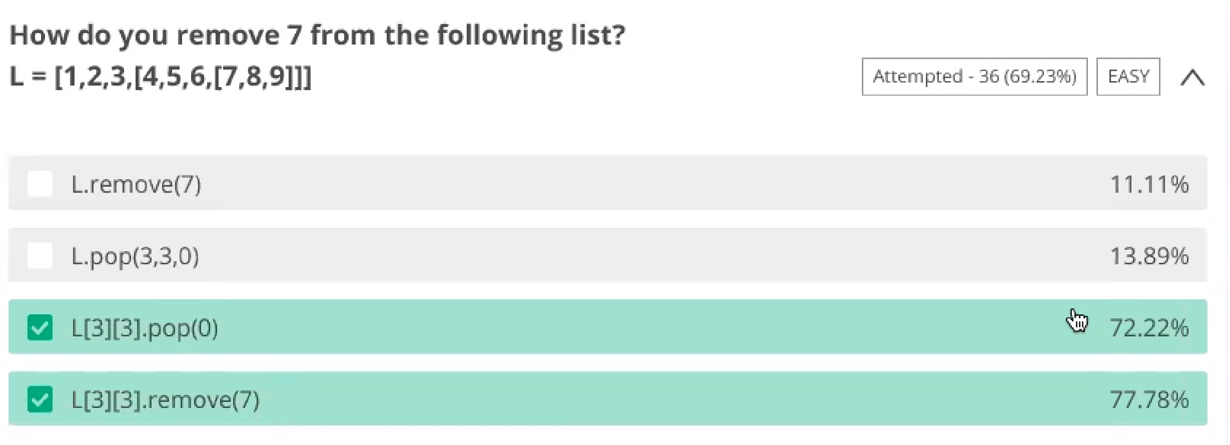
Attempted - 36 (69.23%) EASY

☐ ["First Item", "Second Item", "Third Item", [4,5,6], "Fifth Item"]

☑ ["First Item", "Second Item", "Third Item", [6,5,4], "Fifth Item"] 86.11%

☐ ['Fifth Item', [4, 5, 6], 'Third Item', 'Fourth Item', 'Second Item', 'First Item'] 13.89%

☐ ['Fifth Item', [6, 5, 4], 'Third Item', 'Fourth Item', 'Second Item', 'First Item']



How do you remove 7 from the following list?
L = [1,2,3,[4,5,6,[7,8,9]]]

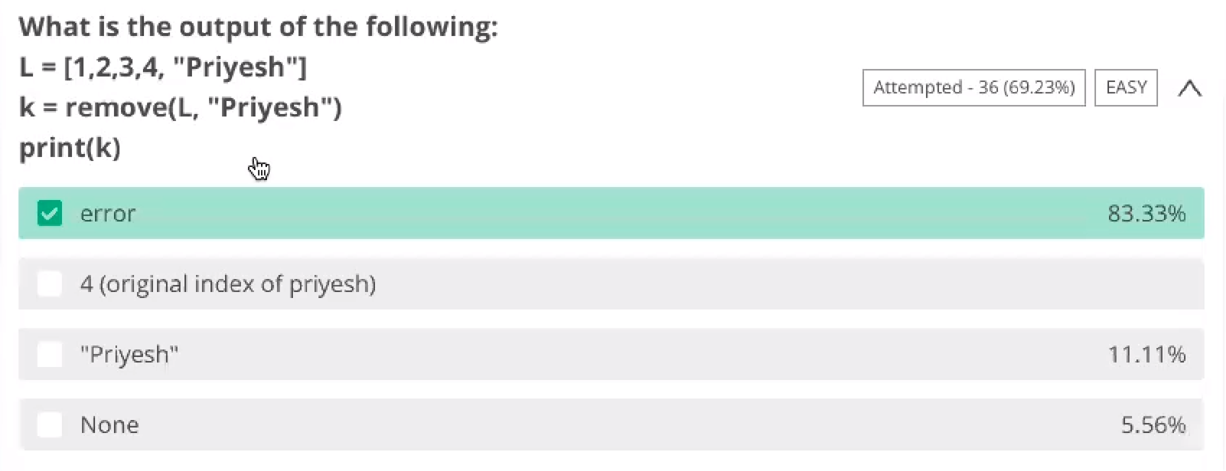
Attempted - 36 (69.23%) EASY

☐ L.remove(7) 11.11%

☐ L.pop(3,3,0) 13.89%

☑ L[3][3].pop(0) 72.22%

☑ L[3][3].remove(7) 77.78%



What is the output of the following:
L = [1,2,3,4, "Priyesh"]
k = remove(L, "Priyesh")
print(k)

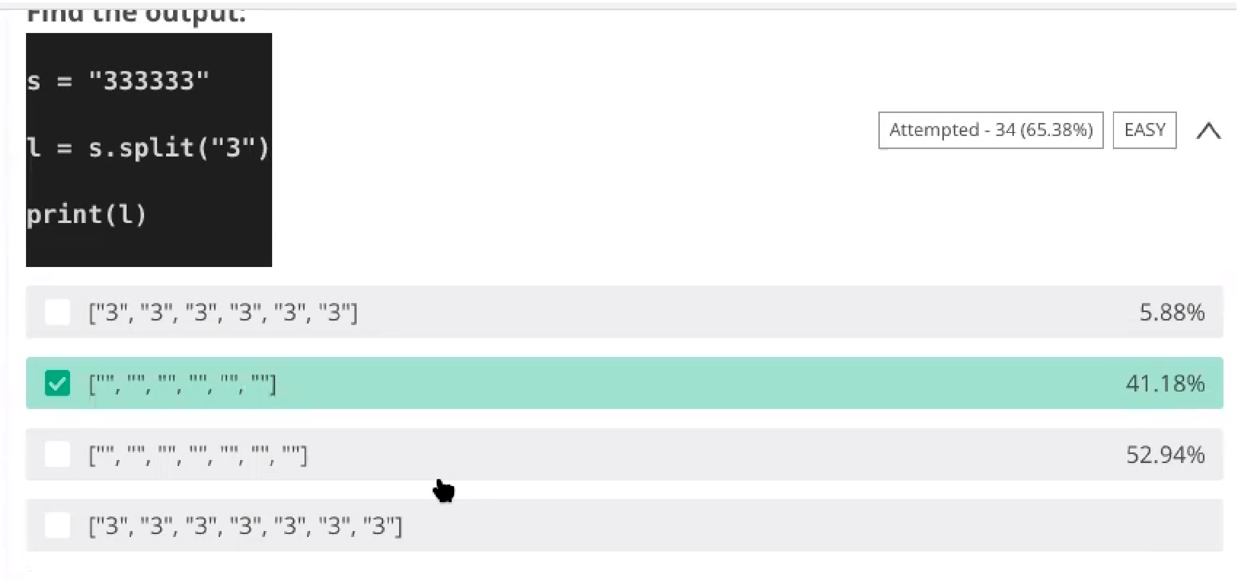
Attempted - 36 (69.23%) EASY

☑ error 83.33%

☐ 4 (original index of priyesh)

☐ "Priyesh" 11.11%

☐ None 5.56%



Find the output:

```
s = "333333"

l = s.split("3")

print(l)
```

☐ ["3", "3", "3", "3", "3", "3"] 5.88%

☑ ["", "", "", "", "", ""] 41.18%

☐ ["", "", "", "", "", "", ""] 52.94%

☐ ["3", "3", "3", "3", "3", "3", "3"]