

Python List Exercise

1: Reverse a given list in Python

```
alist = [100, 200, 300, 400, 500]
```

Expected output:

```
[500, 400, 300, 200, 100]
```

2: Concatenate two lists index-wise

Given:

```
list1 = ["M", "na", "i", "Ke"]  
list2 = ["y", "me", "s", "lly"]
```

Expected output:

```
['My', 'name', 'is', 'Kelly']
```

3: Given a Python list of numbers. Turn every item of a list into its square

Given:

```
aList = [1, 2, 3, 4, 5, 6, 7]
```

Expected output:

```
[1, 4, 9, 16, 25, 36, 49]
```

4: Concatenate two lists in the following order

```
list1 = ["Hello ", "take "]  
list2 = ["Dear", "Sir"]
```

Expected output:

```
['Hello Dear', 'Hello Sir', 'take Dear', 'take Sir']
```

5: Given a two Python list. Iterate both lists simultaneously such that list1 should display item in original order and list2 in reverse order

Given

```
list1 = [10, 20, 30, 40]  
list2 = [100, 200, 300, 400]
```

Expected output:

```
10 400
```

```
20 300
```

```
30 200
```

```
40 100
```

6: Remove empty strings from the list of strings

```
list1 = ["Mike", "", "Emma", "Kelly", "", "Brad"]
```

Expected output:

```
["Mike", "Emma", "Kelly", "Brad"]
```

7: Add item 7000 after 6000 in the following Python List

Given:

```
list1 = [10, 20, [300, 400, [5000, 6000], 500], 30, 40]
```

Expected output:

```
[10, 20, [300, 400, [5000, 6000, 7000], 500], 30, 40]
```

8: Given a nested list extend it by adding the sub list ["h", "i", "j"] in such a way that it will look like the following list

Given List:

```
list1 = ["a", "b", ["c", ["d", "e", ["f", "g"], "k"], "l"], "m", "n"]
```

Sub List to be added = ["h", "i", "j"]

Expected output:

```
['a', 'b', ['c', ['d', 'e', ['f', 'g', 'h', 'i', 'j'], 'k'], 'l'], 'm', 'n']
```

9: Given a Python list, find value 20 in the list, and if it is present, replace it with 200. Only update the first occurrence of a value

Given

```
list1 = [5, 10, 15, 20, 25, 50, 20]
```

Expected output:

```
list1 = [5, 10, 15, 200, 25, 50, 20]
```

10: Given a Python list, remove all occurrence of 20 from the list

```
list1 = [5, 20, 15, 20, 25, 50, 20]
```

Expected output:

```
[5, 15, 25, 50]
```