Assignment 3

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1.

Script #1

```
A=[[10,5],[30],[40]]
B=A
B[0][1]=3
print(A)
```

Output:

[[10, 3], [30], [40]]

There is no list copied, both the variables A and B are pointing to the same list in memory. B is just a reference point to A. Any changes made in list A will reflect in list B and vice versa meaning only one list exists.

Script #2

```
A=[[10,5],[30],[40]]
B=list(A)
B[0][1]=3
print(A)
```

Output:

[[10, 3], [30], [40]]

The structure of A is getting copied to B which is known as a shallow copy. Meaning that list B stores the reference of all the elements in A. If changes are made in A or B, then changes will reflect on B or A respectively.

Script #3

```
import copy
A=[[10,5],[30],[40]]
B=copy.deepcopy(A)
B[0][1]=3
print(A)
```

Output:

[[10, 5], [30], [40]]

This is a2 case of deepcopy, none of the changes made in A will reflect on B and vice versa. Changes made will only be seen in that variable itself. The 2 lists are independent of each other.

2. In .py file.

3.

1 - Pop n-1 elements from C
2 - Push n-1 elements to A
3 - Pop nth element from C
4 - Push nth element to B
5 - Pop n-1 elements from A
5 - Push n-1 elements to B

4. In .py file.

5. In .py file.