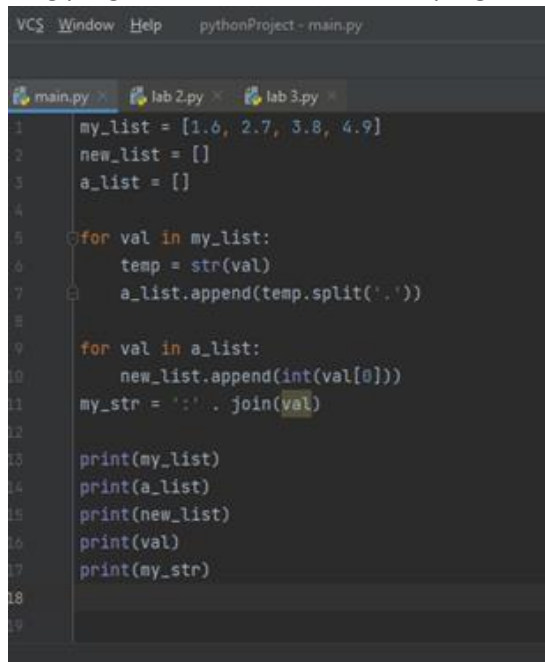


Week 7: List

Part A: List

1. Generate the output from the following program. Understand how the program works.

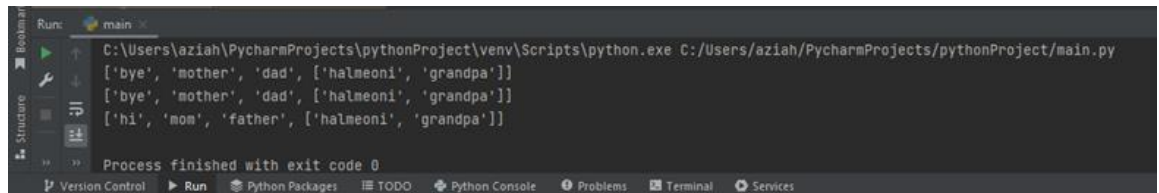


```
1 my_list = [1.0, 2.7, 3.8, 4.9]
2 new_list = []
3 a_list = []
4
5 for val in my_list:
6     temp = str(val)
7     a_list.append(temp.split('.'))
8
9     for val in a_list:
10        new_list.append(int(val[0]))
11 my_str = ':'.join(val)
12
13 print(my_list)
14 print(a_list)
15 print(new_list)
16 print(val)
17 print(my_str)
```

Mutable List

2. List is mutable, write a program to generate the given output.
(**Hint1:** Try to code several alternatives way to generate the same generated output for ['bye', 'mother', 'dad', ['halmeoni', 'grandpa']]. **Hint2:** Using the same list, try to code to change the original list into ['hi', 'mom', 'father', ['halmeoni', 'grandpa']])

Output sample:



```
Run: main
C:\Users\aziah\PycharmProjects\pythonProject\venv\Scripts\python.exe C:/Users/aziah/PycharmProjects/pythonProject/main.py
['bye', 'mother', 'dad', ['halmeoni', 'grandpa']]
['bye', 'mother', 'dad', ['halmeoni', 'grandpa']]
['hi', 'mom', 'father', ['halmeoni', 'grandpa']]
Process finished with exit code 0
```

3. Given numList = [1,3,5,5,2]. Write a program that:
 - a. Sorts the list.
 - b. Adds 4 at the end of the list
 - c. Remove on duplicate
 - d. Inserts 6 at index 4
 - e. Print the number of items in the list.

Part B: Test yourself!

1. Write a Python code to create a list number using these number = 65, 75, 85, 95, 105 and check number that prompt the user to enter a number to check that number is available or not in list.
2. Write a Python program to shuffle and print a specified list.
food = ["cookies", "brownies", "cake", "ice cream", "chocolate"]
3. Write a Python program to get the difference between the two lists.
4. Write a Python program to convert a list of characters into a string.
5. Write a Python program to generate the expected output as below:
Given list is [100, 200, 300, ["turmeric", "galanga", ["kiwi", "apple", "oranges"]], 50, 60, 70]

Expected output:

- i) apple
- ii) [300, ['turmeric', 'galanga', ['kiwi', 'apple', 'oranges']]] [50, 60, 70]
- iii) [100, 200, 300, ['turmeric', 'galanga', ['kiwi', 'apple', 'oranges']], 50, 60, 70, 'kiwi', 'apple', 'oranges]