Activity: create a list

In a script called **A13-build-list.py**
Make a for loop that prompts the user for a subject 5 times, then appends each subject to list subjects.

Part of the code is reported below. You talk is to complete the code by filling in _____

```
subjects = ___

for count in _____:
      subj=input("input a subject: ")
       __________


print(subjects)
```

Activity: create a list

In the provided script **A13-list1.py** there are some variables.

Edit the script and do the following:

a. Use list comprehension to create a new list called L2, out of list L1. Print L2 to screen.
List L2 should be:

```
['apple', 'banana', 'cherry', 'kiwi', 'mango']
```

You should use a string method inside the comprehension.

b. Use list comprehension to create a new list called **ave2010,** out of dictionary **Dave**.
List **ave2010** should contain only the names of the movies released after 2010.
Print ave2010 to screen. The list ave2010 should be:

```
['Captain America', 'Thor', 'Doctor Strange', 'Spider-Man: Homecoming']
```

Activity : Create a dictionary

The provided script **A13-dict1.py** defines this dictionary:

```
d1={'anita':[168,65,122],'toni':[179,105,110],
'maria':[190,95,130],'laura':[176,100,145]}
```

d1={name: [height, weight, blood pressure] }

height is in cm, weight is in kg, and blood pressure is in millimeters of mercury (mmHg)

a. Use dictionary comprehension to create a new dictionary called d2, out of d1.
d2 should contains the information on patients with both weight larger than 90 and blood pressure larger than 120 . Print d2 to screen.
d2 should be:

```
{'maria': [190, 95, 130], 'laura': [176, 100, 145]}
```

b. Create the same dictionary as in point a, but now use a for loop, and name the new dictionary d3. Print d3 to screen.

Activity: Create a list with a while loop

In a script called **A13-while1.py** do the following:

a. Define a variable called **mycolor** and assign to it a color of your choice. The color name should be a string type.

b. Use a while loop and in it:

Use one input function to ask the user to guess your color. The while loop should stop when the user's color matches your color.

If the user enters a wrong color, print to screen "Sorry, try again".

Within the while loop you should create a list that collects only the wrong colors.

c. Print the list of wrong colors to screen.

Print the

Here an example of output, in the case mycolor is red

```
Guess my color: green
Sorry, try again
Guess my color: yellow
Sorry, try again
Guess my color: red
This is the list of wrong colors: ['green', 'yellow']
```

Sum numbers of two lists

In a script called **A13-sum-lists.py**

a. Define these two lists

```
L1=[1,2,3,4]
L2=[5,6,7,8]
```

b. Use one for loop to create a list Lsum where each element is the sum of the elements of the two lists L1 and L2. The final list Lsum should be `[6,8,10,12]`

Think about how to loop over multiple sequences

More on create a dictionary

In a script called **A13-dict2.py** do the following:

a. Make a dictionary out of these two lists, where the keys are the fruits and the values are the corresponding numbers, but only include the ones with a number greater than 50.

```
fruits = ["apple", "banana", "cherry", "kiwi", "mango"]
numbers=[3,79,45,66,5]
```

Do it in two ways:

a1. by using a for loop. Call the new dictionary D1. Print D1 to screen.

a2. by using dictionary comprehension. Call the new dictionary D2. print D2 to screen.

```
{'banana': 79, 'kiwi': 66} # result
```

b. Use dictionary comprehension to create a new dictionary, dict2, out of dict1, where only the key:value pairs with value above 2000 are taken to the new dictionary.

```
dict1={"NFLX":4950,"TREX":2400,"FIZZ":1800, "XPO":1700}
```

Print dict2 to screen.

More one create a list

In **A13-list2.py**

a. Use list comprehension to make a new list, called newlist, of all the words in the string sentence that are less than 4 letters.
Hint: First you should convert the sentence into the correct type.

```
sentence ='Opinion is the medium between knowledge and ignorance'
```

b. Here, use a for loop to make a new list, called newlist1, of all the words in the string **sentence** that are less than 4 letters.

```
['is', 'the', 'and'] # result
```

Submit to A13:

- **A13-build-list.py**
- **A13-list1.py**
- **A13-dict1.py**
- **A13-while1.py**

The other exercises are optional