# 📝 Python Practice – Lists, Functions, and Tuples

**Instructions:**  
Open your Google Colab notebook.

For each question:

1. Read it carefully.
2. Try to guess what the code will do before you run it.
3. Test it out in Colab.

**Tips for Students:**

* Lists use [] and can be changed.
* Tuples use () and cannot be changed.
* Use .append() to add items to a list.
* Lists and tuples both start counting positions at **0**.

### 1. Create and Print a List

**Question:**  
Create a list called fruits with "apple", "banana", and "cherry".  
Print the list.

### 2. Append to a List

**Question:**

1. Start with colors = ["red", "blue"]
2. Append "green"
3. Print the list

**Hint:**  
Use .append()

### 3. Loop Through a List

**Question:**  
Use a for loop to print each pet in pets = ["dog", "cat", "fish"].

**Hint:**

First create your list, then use a for loop to print each item of the list.

### 4. Function with a List

**Question:**  
Write a function say\_hello(names) that takes a **list** of names and prints:

Hello Alice!

Hello Bob!

for each name in the list.

**Hint:**  
First create your list, then use a for loop to print “Hello” and use .format for the name.

### 5. Function that Adds Numbers

**Question:**  
Write a function add\_numbers(numbers) that adds up all the numbers in a list and **returns** the total.  
Test it with [1, 2, 3, 4].

**Expected Output:**  
10

### 6. Double Each Number

**Question:**  
Write a function double\_numbers(numbers) that prints each number in the list multiplied by 2.  
Test with [2, 4, 6].

**Expected Output:**

4

8

12

### 7. Create and Print a Tuple

**Question:**  
Create a tuple days with "Mon", "Tue", "Wed".  
Print the first item in the tuple.

**Hint:**  
Tuples use () not [].

### 8. Tuple vs List

**Question:**  
Try this code:

my\_list = ["apple", "banana"]

my\_list[0] = "orange"

print(my\_list)

my\_tuple = ("apple", "banana")

my\_tuple[0] = "orange"

What happens? Why does this happen?

### 9. Filling up an empty list

**Question:**  
Create an empty list called no\_items. Use the append method to add five colours of your choice to this list. Print the list once you have appended the colours.

**Hint:**

**An empty list is simply [].**

### 10. Challenge: Mixed List

**Question:**  
Given:

mixed = ["dog", 5, "cat", 10]

1. Print the first item
2. Print the number 10 using its position

**Hint:**  
Positions: [0, 1, 2, 3]