**Python Basics lab exercises**

**NOTE: DON’T USE ANY LOOP OR CONTROL STATEMENTS**

1. Write a Python program to print the following string in a specific format

*Sample String :* "Twinkle, twinkle, little star, How I wonder what you are! Up above the world so high, Like a diamond in the sky. Twinkle, twinkle, little star, How I wonder what you are"

*Output :*

Twinkle, twinkle, little star,

How I wonder what you are!

Up above the world so high,

Like a diamond in the sky.

Twinkle, twinkle, little star,

How I wonder what you are

2. Write a Python program which accepts the radius of a circle from the user and compute the area.

### 3. Display three string “Name”, “Is”, “James” as “Name\*\*Is\*\*James”

Use the print() function to format the given words in the mentioned format. Display the \*\* separator between each string.

Sample output: Name\*\*Is\*\*James

4. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '$', except the first char itself. Sample String : 'restart'  
Expected Result : 'resta$t'

5. Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string. Sample String : 'abc', 'xyz'   
Expected Result : 'xyc abz'

6. Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.

Sample String : 'abc', 'xyz'   
Expected Result : 'xyc abz'

7. Write a Python program to remove the characters which have odd index values of a given string.

8. Write a Python script to add a key to a dictionary.

Sample Dictionary : {0: 10, 1: 20}  
Expected Result : {0: 10, 1: 20, 2: 30}

9. Write a Python script to concatenate following dictionaries to create a new one.

Sample Dictionary :   
dic1={1:10, 2:20}   
dic2={3:30, 4:40}   
dic3={5:50,6:60}  
Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}

10. Write a Python script to check whether a given key already exists in a dictionary

11. Write a Python program to create a tuple with numbers and print one item

12. Write a Python program to get the 4th element and 4th element from last of a tuple

13. Write a Python program to convert a list to a tuple.

14. Write a Python program to calculate the average value of the numbers in a given tuple of tuples.

Original Tuple:  
((10, 10, 10, 12), (30, 45, 56, 45), (81, 80, 39, 32), (1, 2, 3, 4))  
Average value of the numbers of the said tuple of tuples:  
[30.5, 34.25, 27.0, 23.25]

Original Tuple:   
((1, 1, -5), (30, -15, 56), (81, -60, -39), (-10, 2, 3))  
Average value of the numbers of the said tuple of tuples:  
[25.5, -18.0, 3.75]

15. Write a Python program to check if a specified element presents in a tuple of tuples. Original list:  
(('Red', 'White', 'Blue'), ('Green', 'Pink', 'Purple'), ('Orange', 'Yellow', 'Lime'))  
Check if White presenet in said tuple of tuples!  
True  
Check if White presenet in said tuple of tuples!  
True  
Check if Olive presenet in said tuple of tuples!  
False

16. Write a Python program to add member(s) in a set

17. Write a Python program to remove item(s) from a given set.

18. Write a Python program to create an intersection of sets

19. Write a Python program to create set difference.

### 20. Reverse a list in Python

21. Write a Python program to print a specified list after removing the 0th, 4th and 5th elements.

Sample List : ['Red', 'Green', 'White', 'Black', 'Pink', 'Yellow']  
Expected Output : ['Green', 'White', 'Black']

### 22. Write a program to count the number of items stored in a list.

**Hint**  
num = [23, 34, ‘hello’, 32, 56]

**Expected output**  
Total count of items are: 5

### 23. Write a program to reverse a list in Python.

### 24. Python program to square each element of a list.

### 25. Python program to append an element to a list.

**Hint**  
Given num = [23,45,67,8,9] **Input**:  
Enter the item to insert: study

**Expected output**  
Result: [23,45,67,8,9, ‘study’]

### 26. Write a program to sum all the elements of a list.

### 27. Write a program to get the maximum number from a list.

**Hint**  
Given num = [2,3,2,4,7,8]

**Expected output**  
Max number in list items is 8

28. Python Program to Perform Arithmetic Operations

29. Python program for Arithmetic Operations on Lists

## 30. Python Program to Find Largest and Smallest Item in a Tuple