# Week 6 (To submit)

#### Exercise 1

Write a Python program to count the total of even and odd numbers from 1 - 100.

**Expected Output:** 

Total for even numbers: 2450 Total for odd numbers: 2500

#### Exercise 2

Write a Python program to construct the following pattern, using a nested for loop.

```
X X X X X
X X X X
X X X
X
Welcome to Python Programming!
X
X X
X X X
X X X
```

## Exercise 3

Write a Python program which accepts decrease numbers from input then calculate and display the total and average.

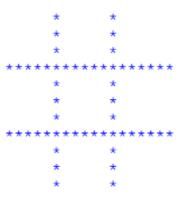
Sample out: Initial Number: 5 Ending Number: 50 Decrease Number: 2

Note: In this situation, the program should be able to swap the value for initial number and ending number and convert decrease number from positive to negative.

#### Exercise 4

Write a Python program by using a nested FOR loop to print tic tac toe pattern.

## Expected Output:



## Exercise 5

Write a python program by using for loop to accept input (numbers) into a list; then later using for loop to calculate the total and average.

Output: The list of numbers key-in, total and average of numbers key-in.

```
Enter numbers *Separate by using commas:8,9,7,8,5

**Output**
List: ['8', '9', '7', '8', '5']
Numbers entered: 5
Total: 37
Average: 7.4
>>>
```

#### Exercise 6

Write a python program by using for loop to accept input (numbers) into a list.

## The program will:

- Calculate the total based on the following condition:
   Values more than or equal 10, total each value by multiplying 1.5, otherwise total each value by multiplying 2.
- 2. Display the values for "Values>=10" and "Values<10".
- 3. Find out the numbers for Even values and Odd values.
- 4. Display the values for "Even Values" and "Odd Values".

#### Sample output:

```
Enter numbers *Separate by commas:12,17,14,8,9,5
~~Output~~
Values >=10: ~12~17~14
Values < 10: ~8~9~5
Total for values >= 10: 64.5
Total for values < 10: 44
Numbers of Even values: 3
Numbers of Odd values: 3
Even values: ~17~9~5
Odd values: ~12~14~8
Total: 108.5
>>>
```

## Exercise 7

Write a python program for the following expected output:

- Accept a phrase
- Enter a letter find and replace with new letter
- Display the new phrase after the process
- Display the times of the find letter appeared in the phrase.
- Display the position of the find letter appeared in the phrase.

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## **Expected Output:**

```
~Find and Replace~
Enter a phrase:Python Programming
Enter a letter to find:P
Enter a letter to replace:x
New phrase: xython xrogramming
P appeared 2 times in the phrase
P appeared at position: ~1~8
>>>
```

## Exercise 8

Scrabble is a game where players get points by spelling words. Words are scored by adding together the point values of each individual letter.

Write a python program for the following output.

## Expected output:

```
Scrabble Game
Enter a word:Coding
*********
* Letter
       * Score
*********
*********
       * 1
*********
        * 1
* d
*********
       * 4
*********
* n
       * 1
**********
       * 4
* g
*********
Total: 14
>>>
```

## Information:

Score for each letter:

| а | 1  | b | 3 | С | 3 | d | 1 | е | 2 |
|---|----|---|---|---|---|---|---|---|---|
| f | 2  | g | 4 | h | 1 | i | 4 | j | 5 |
| k | 8  | - | 3 | m | 1 | n | 1 | 0 | 1 |
| р | 10 | q | 3 | r | 1 | S | 1 | t | 1 |
| u | 1  | V | 4 | W | 4 | Х | 4 | У | 8 |
| Z | 10 |   |   |   |   |   |   |   |   |