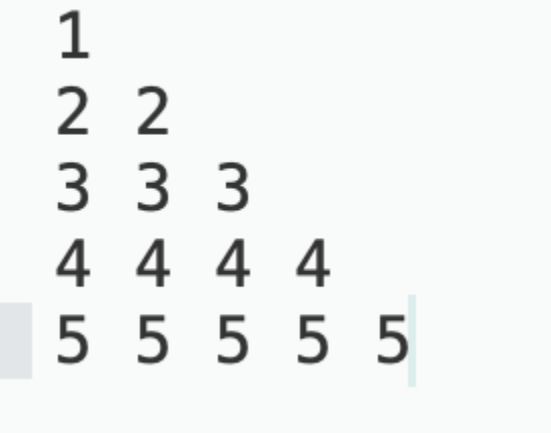
Python Practice Exercises – Set 1 – Data types, Conditional Statements, Loops & Functions

1. Write a program to iterate the first 10 numbers and in each iteration, print the sum of the current and previous number.

2. Write a function to return True if the first and last number of a given list is same. If numbers are different, then return False.
    a. [10, 20, 30, 40, 10] should return True
    b. [75, 65, 35, 75, 30] should return False

3. Write a program to iterate the given list of numbers and print only those numbers which are divisible by 5

4. Print following pattern in Python



5. Write a program to check if the given number is a palindrome number.

6. Write a program to calculate the sum of all numbers from 1 to 10

1+2+3+4+5+6+7+8+9+10 i.e. output of program should be 55

7. Write a program to print multiplication table of 7
8. Write a program to display only those numbers from a list that satisfy the following conditions
    a. The number must be divisible by five
    b. If the number is greater than 150, then skip it and move to the next number
    c. If the number is greater than 500, then stop the loop

9. Write a program to count the total number of digits in a number
10. Write a program to display all prime numbers between 1 to 100
11. Write a program to display Fibonacci series from 1 to 10
12. Write a program to find factorial of number 8
13. Write a program using a loop to display elements from a given list present at even index positions
14. Write a program to remove the item present at index 4 and add it to the 2nd position and at the end of the list.

```
list1 = [54, 44, 27, 79, 91, 41]
```

15. Write a program to iterate a given list and count the occurrence of each element and create a dictionary to show the count of each element.

16. Iterate a given list and check if a given element exists as a key's value in a dictionary. If not, delete it from the list

Given:

```
roll number = [47, 64, 69, 37, 76, 83, 95, 97]
sample_dict = {'Jhon':47, 'Emma':69, 'Kelly':76, 'Jason':97}
```

Expected Outcome:

After removing unwanted elements from list [47, 69, 76, 97]

17. Remove duplicates from a list and create a tuple and find the minimum and maximum number

Sample_list = [87, 45, 41, 65, 94, 41, 99, 94]

18. Take any 2 Strings, `s1` and `s2`. Write a program to create a new string `s3` by appending `s2` in the middle of `s1`.

19. Given two strings, s1 and s2. Write a program to create a new string s3 made of the first char of s1, then the last char of s2, Next, the second char of s1 and second last char of s2, and so on. Any leftover chars go at the end of the result.

20. Write a program to count occurrences of all characters within a string

```
str1 = "Apple"
Expected output - {'A': 1, 'p': 2, 'l': 1, 'e': 1}
```