Assignment 2 Machine learning

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github link : https://github.com/MohamadSuhail/assignment2-ML
Video link : https://youtu.be/b3uyg0zgvzU

1. Use a python code to display the following star pattern using the for loop

Output:

[4]:
```
rows = 5
for i in range(0, rows):
    for j in range(0, i + 1):
        print("*", end=' ')
    print("\r")

for i in range(rows, 0, -1):
    for j in range(0, i - 1):
        print("*", end=' ')
    print("\r")
```

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

2. Use looping to output the elements from a provided list present at odd indexes. my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

Output :

```
my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
# stat from index 1 with step 2( means 1, 3, 5, an so on)
for i in my_list[1::2]:
    print(i, end=" ")
```

```
20 40 60 80 100
```

3. Write a code that appends the type of elements from a given list.

Input

x = [23, 'Python', 23.98]

Expected output [23, 'Python', 23.98] [, ,]

Output :

```
x = [23,'Python', 23.98]
n = []
for i in range(len(x)):
    n.append(type(x[i]))
print(n)
print(x)
```

```
[<class 'int'>, <class 'str'>, <class 'float'>]
[23, 'Python', 23.98]
```

4. Write a function that takes a list and returns a new list with unique items of the first list.

Sample List: [1,2,3,3,3,3,4,5]

Unique List: [1, 2, 3, 4, 5]

Output:

```
def unique_list(l):
  x = []
  for a in l:
    if a not in x:
      x.append(a)
  return x

print(unique_list([1,2,3,3,3,3,4,5]))
```

```
[1, 2, 3, 4, 5]
```

5. Write a function that accepts a string and calculate the number of upper-case letters and lower-case letters. Input String: 'The quick Brow Fox' Expected Output: No. of Upper-case characters: 3 No. of Lower-case Characters: 12

Output:

```
def string_test(s):
    d={"UPPER_CASE":0, "LOWER_CASE":0}
    for c in s:
        if c.isupper():
           d["UPPER_CASE"]+=1
        elif c.islower():
           d["LOWER_CASE"]+=1
        else:
           pass
    print ("Original String : ", s)
    print ("No. of Upper case characters : ", d["UPPER_CASE"])
    print ("No. of Lower case Characters : ", d["LOWER_CASE"])

string_test('The quick Brown Fox')
```

```
Original String :  The quick Brown Fox
No. of Upper case characters :  3
No. of Lower case Characters :  13
```