MACHINE LEARNING ASSIGNMENT 2

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Video Link:
https://drive.google.com/file/d/1bsLGBZ63YC2wXQSIbgXa17MkQfq00Hfm/view?usp=share_link
GitHub Link :
https://github.com/AshokSai1999/Machine-Learning.git

Q1) Use a python code to display the following star pattern using the for loop

```
*

* *

* * *

* * * *

* * * * *

* * * *

* * *

* *

*
```

```
starpattern_rows = 5
for a in range(0,starpattern_rows):
    for b in range(0, a + 1):
        print("*", end=' ')
    print("\r")
for a in range(starpattern_rows, 0, -1):
    for b in range(0, a - 1):
        print("*", end=' ')
    print("\r")
```

In [20]:
```
#Question 1
starpattern_rows = 5
for a in range(0,starpattern_rows):
    for b in range(0, a + 1):
        print("*", end=' ')
    print("\r")

for a in range(starpattern_rows, 0, -1):
    for b in range(0, a - 1):
        print("*", end=' ')
    print("\r")
```

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

Q2) 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]

my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
print("The Given list is :")
print(my_list)
print("The odd positions elements are : ")
for i in range(1, len(my_list), 2):
print(my_list[i])

In [15]:
```
#Question 2
my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
print("The Given list is :")
print(my_list)
print("The odd positions elements are : ")
for i in range(1, len(my_list), 2):
   print(my_list[i])
```

```
The Given list is :
[10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
The odd positions elements are :
20
40
60
80
100
```

Q3) 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] [, ,]

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

```
In [11]: #Question 3
         x = [23, 'Python',23.98]
         y = []
         for i in range(len(x)):
             y.append(type(n[i]))
         print(x)
         print(y)

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

Q4) 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]

```
def unique_list(l):
    a = []
    for b in l:
        if b not in a:
            a.append(b)
    return a
print(unique_list([1,2,3,3,3,3,4,5]))
```

MACHINE LEARNING ASSIGNMENT 2

In [14]:
```
#Question 4
def unique_list(l):
  a = []
  for b in l:
    if b not in a:
      a.append(b)
  return a

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

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

Q5) 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

```
def string(s):
    a={"UPPER_CASE":0, "LOWER_CASE":0}
    for b in s:
        if b.isupper():
           a["UPPER_CASE"]+=1
        elif b.islower():
           a["LOWER_CASE"]+=1
        else:
           pass
  print ("Original String : ", s)
  print ("No. of Upper case characters : ", a["UPPER_CASE"])
  print ("No. of Lower case Characters : ", a["LOWER_CASE"])
string('The quick Brow Fox')
```

MACHINE LEARNING ASSIGNMENT 2

In [18]:
```
#Question 5
def string(s):
    a={"UPPER_CASE":0, "LOWER_CASE":0}
    for b in s:
        if b.isupper():
           a["UPPER_CASE"]+=1
        elif b.islower():
           a["LOWER_CASE"]+=1
        else:
           pass
    print ("Original String : ", s)
    print ("No. of Upper case characters : ", a["UPPER_CASE"])
    print ("No. of Lower case Characters : ", a["LOWER_CASE"])

string('The quick Brow Fox')
```

```
Original String :  The quick Brow Fox
No. of Upper case characters :  3
No. of Lower case Characters :  12
```