Machine Learning ICP2

Question 1:

```
# Program 01
Use a python code to display the following star pattern using the for loop

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

In [2]:
```
for i in range(1,6):
    print("* "*i)
for j in range(4,0,-1):
    print("* "*j)
```

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

Question 2:

```
# Program 02

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]
for i in range(1,10,2):
    print(my_list[i])
```

```
20
40
60
80
100
```

Question 3:

```
# Program 03

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]
 [<class 'int'>, <class 'str'>, <class 'float'>]
```

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

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

Question 4:

```
# Program 04

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(x):
    unique_list=[]
    for i in x:
        if i not in unique_list:
            unique_list.append(i)
    return unique_list
sample_list=[1,2,3,3,3,4,5]
print(unique(sample_list))
```

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

Question 5:

```
# Program 05

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
```

```
s=input("Enter your string: ")
upper_count=lower_count=0
for i in s:
    if i.isupper():
        upper_count+=1
    elif i.islower():
        lower_count+=1
print('No. Uppper-case characters:',upper_count)
print('No. Lower-case characters:',lower_count)
```

```
Enter your string: The quick Brow Fox
No. Uppper-case characters: 3
No. Lower-case characters: 12
```