**Machine Learning Assignment-2**

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**Question 1**

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

**Solution Screenshot:**

**Chart, scatter chart

Description automatically generated**

**Description:**

I have used two for loops to print star pattern. Upper part of the loop with one loop and lower part with another loop.

**Question 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]**

**Solution Screenshot:**

**Text, whiteboard

Description automatically generated**

**Description:**

To get odd indexes, I have used range function from “1” to “Length of the list” with step “2”.

**Question 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]**

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

**Solution Screenshot:**

**Graphical user interface, text, application

Description automatically generated**

**Description:**

Traverse the list and append the type of the elements using type() function to the new list.

**Question 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]**

**Solution Screenshot:**

**Text

Description automatically generated**

**Description:**

Here, I created a function with name remove\_duplicates which will return unique items of the list where, I used set() to remove duplicate items from the list.

**Question 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**

**Solution Screenshot:**

**Text

Description automatically generated**

**Description:**

To count upper and lower case letters in a given string. I used islower() and isupper() functions.

**Github Link:** https://github.com/ChetanNaga/Machine-Learning