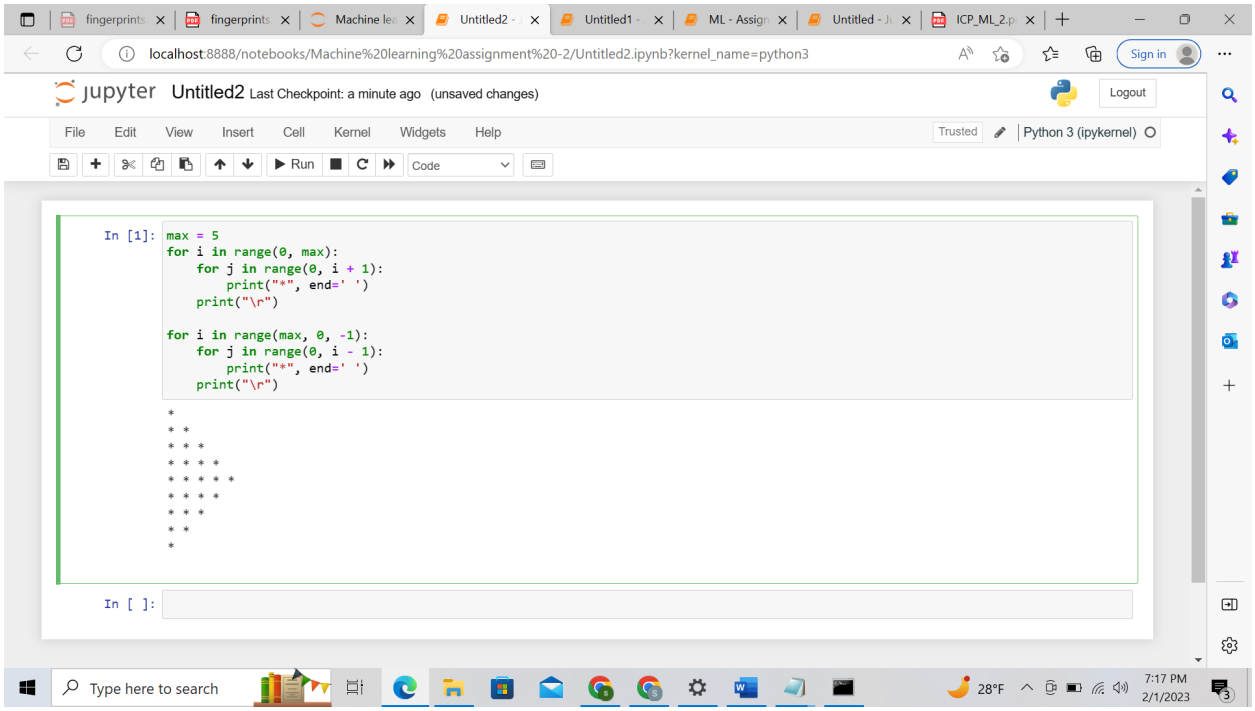
Spring 2023: CS5710 – Machine Learning
In-Class Programming Assignment-2

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

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

Ans

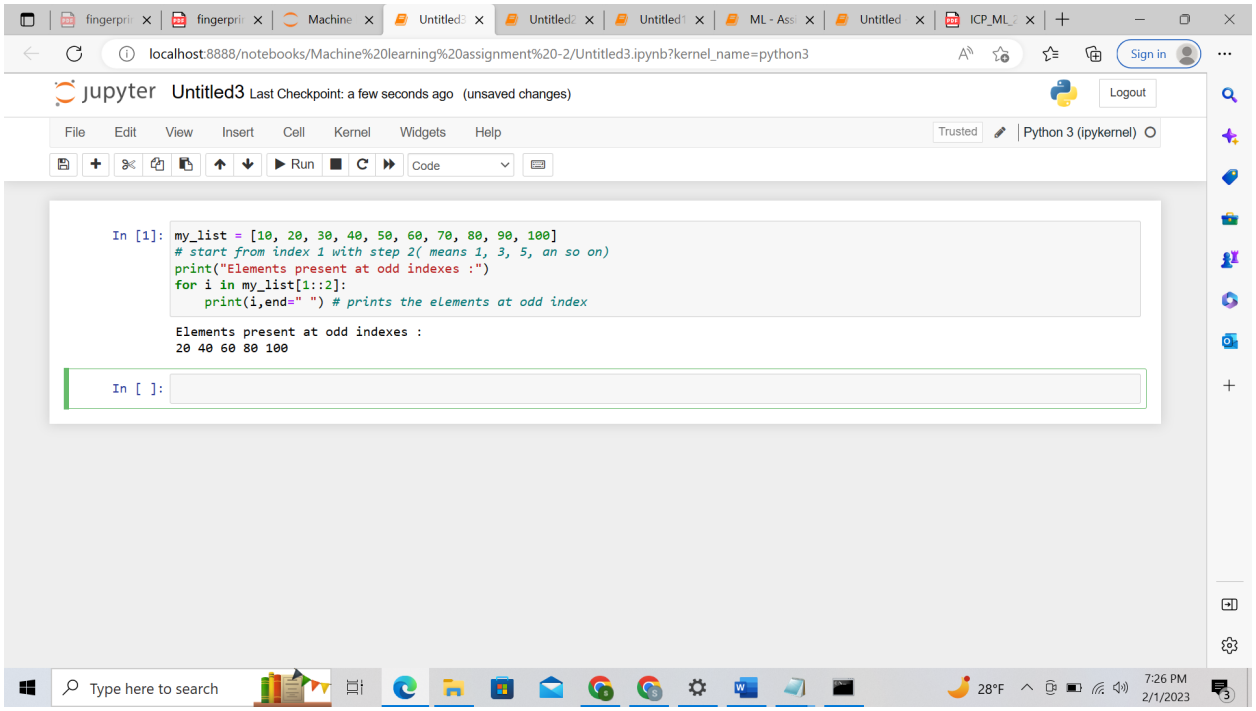


1) To print the pattern the pattern as above I have used for loop
2) Here assigned the value for max as 5
3) Used 2 for loops, one inside the other
4) Used end=" " and "\r" to print the pattern as above.

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]

Ans



1) my_list has the input values of the problem
2) We have used the for loop to print the elements present at odd indexes.
3) Using print and end=" " all the unique elements are printed in the same line.

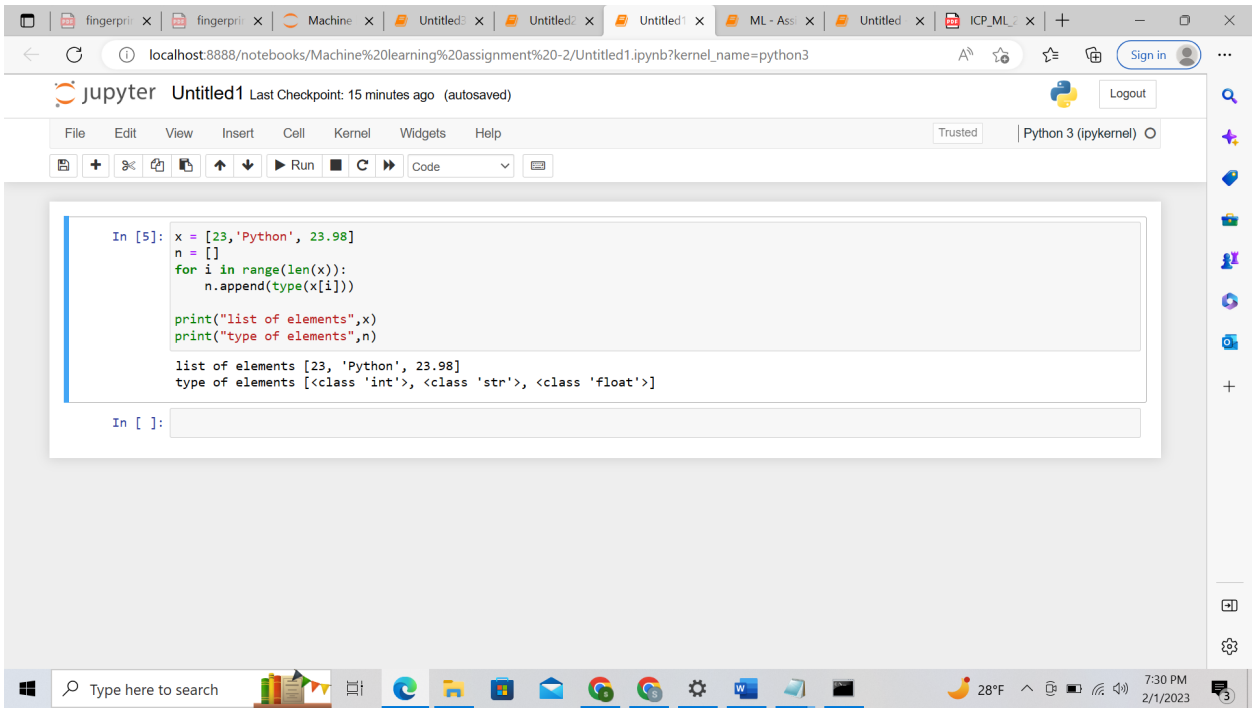
3. Write a code that appends the type of elements from a given list.
Input :

x = [23, ‘Python’, 23.98]

Expected output :

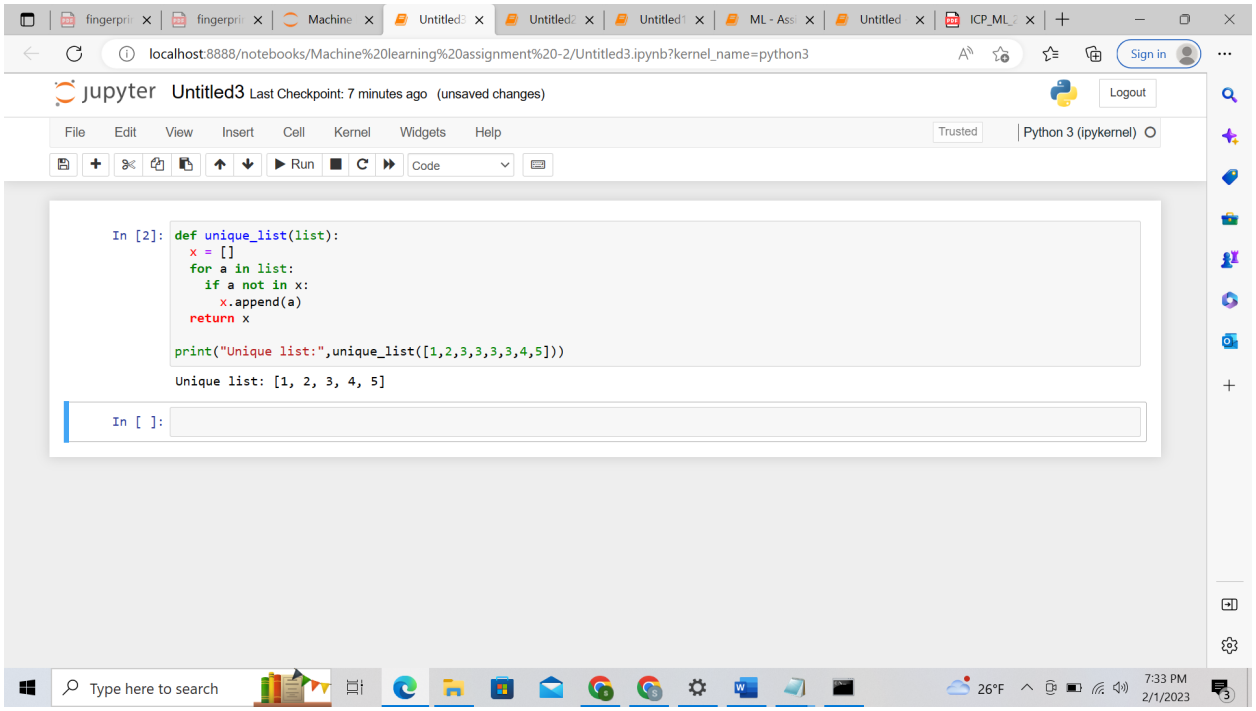
[23, 'Python', 23.98]
[<class 'int'>, <class 'str'>, <class 'float'>]

Ans



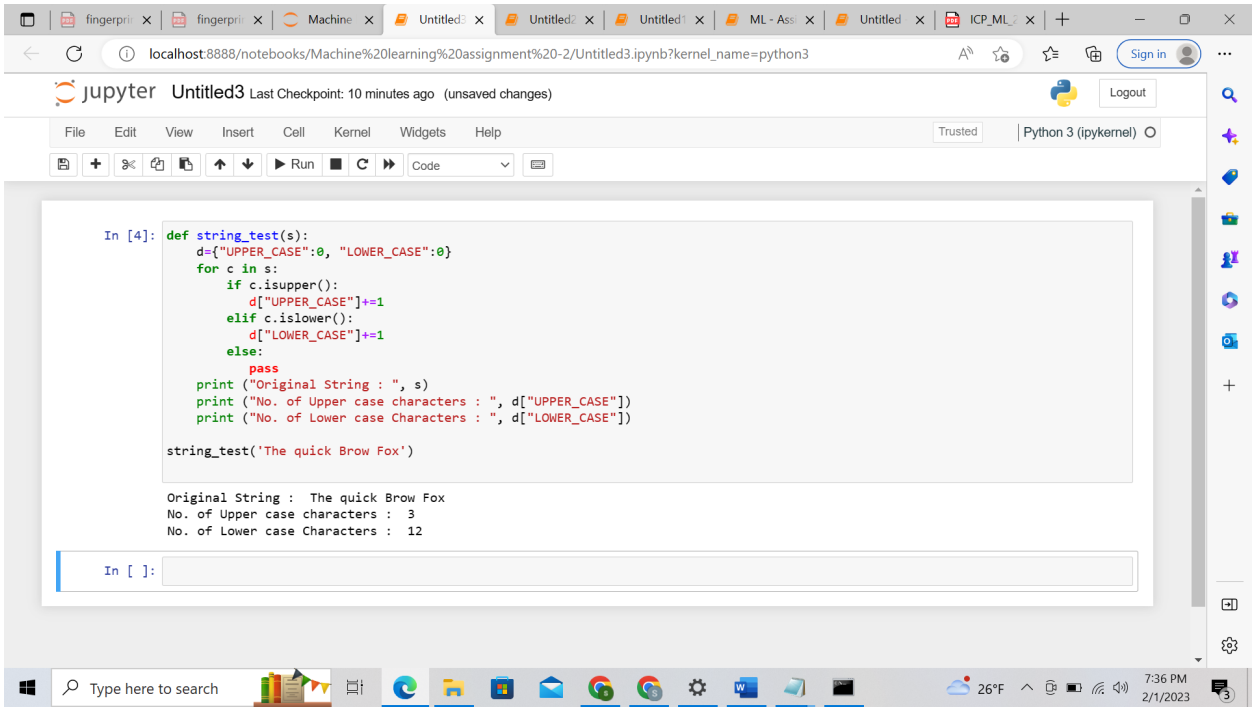
1) List X stored the elements 23,’Python’,23.98.
2) We have used for loop and type() function to find out the type of each & every element in the list.
3) And appended those numbers consequently to a list.
4) Using print() function printed on the console.

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]
Ans



1) Created a function named unique_list() which takes the list as the input.
2) Inside the function using for loop and if condition , the unique elements are stored in the list x[ ]
3) The function unique_list() is called from the main in the print function
4) And the desired output is printed.

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
Ans



1) Created the string_test() function to take string as input.
2) Using for loop and if else statement the number of upper case and lower case letters are retrieved and stored in key value pair
3) The number of Upper case characters are stored in ‘UPPER_CASE’ key.
4) The number of Lower case characters are stored in ‘LOWER_CASE’ key.
5) The output is printed using print() function.

Git hub link : https://github.com/ShruthiVallapReddy/Machine-learning-assignment--2.git