

# MACHINE LEARNING

GITHUB LINK: [https://github.com/sravs2031/machine\\_learning-assignment-2.git](https://github.com/sravs2031/machine_learning-assignment-2.git)

RECORDING VIDEO LINK: [https://github.com/sravs2031/machine\\_learning-assignment-2.git](https://github.com/sravs2031/machine_learning-assignment-2.git)

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Q1. Displayed a star pattern using for loop.

```
def display_star_pattern():
    pattern = ["*", "* *", "* * *", "* * * *", "* * * * *", "* * * * *", "* * * *", "* * *", "* *"]
    for stars in pattern:
        print(stars)
display_star_pattern()

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

Q2. With the following list by using for loop as i=0 we got odd indexes as a result.

```
[2]: my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
for i in range(len(my_list)):
    if i % 2 != 0:
        print(my_list[i])
```

```
20
40
60
80
100
```

Q3. By using the input we have used append function to get the type of elements in the list.

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

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

Q4. By this function uses a set to remove duplicates from the list.

```
[4]: def get_unique_items(input_list):
      unique_list = list(set(input_list))
      return unique_list

sample_list = [1, 2, 3, 3, 3, 3, 4, 5]
unique_list = get_unique_items(sample_list)
print("Sample List:", sample_list)
print("Unique List:", unique_list)

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

Q5. By using the input string it takes the input and counts the number of upper case and lower case letters.

```
[5]: def count_upper_lower(input_string):  
    upper_count = 0  
    lower_count = 0  
    for char in input_string:  
        if char.isupper():  
            upper_count += 1  
        elif char.islower():  
            lower_count += 1  
    return upper_count, lower_count  
input_string = 'The quick Brown Fox'  
upper_count, lower_count = count_upper_lower(input_string)  
print("Input String:", input_string)  
print("Number of uppercase letters:", upper_count)  
print("Number of lowercase letters:", lower_count)
```

Input String: The quick Brown Fox  
Number of uppercase letters: 3  
Number of lowercase letters: 12

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