GitHub: <https://github.com/rxu95040/machinelearning/tree/main/Assignment2>

Video Link: <https://drive.google.com/file/d/1aMYlVH5ZT7paim0Jd9Iit2RGU1-Hat7e/view?usp=drive_link>

**Question 1**

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

A black rectangle with white dots

Description automatically generated

**Code :-**

max = 5

i = 0

while i < max:

j = 0

while j <= i:

print("\*", end =" ")

j += 1

print('')

i += 1

i = max - 1

while i > 0:

j = i

while j > 0:

print("\*", end =" ")

j -= 1

print('')

i -= 1

A screenshot of a computer program

Description automatically generated

1. 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]

**Code :-**

my\_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

for index in range(0, len(my\_list), 2):

print(my\_list[index])

A screen shot of a computer

Description automatically generated

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'>]

**Code :-**

x = [23, 'Python', 23.98]

y = []

for item in x:

y.append(type(item))

print(f'Input : {x}')

print(f'Expected Output : {y}')

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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]

**Code :-**

def getUniqueList(inputList: list):

result = set()

for item in inputList:

result.add(item)

return list(result)

x = [1,2,3,3,3,3,4,5]

result = getUniqueList(x)

print(f'Input list : {x}')

print(f'Unique list : {result}')

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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

**Code :-**

def calculateLetterCount(input: str):

upperCount = 0

lowerCount = 0

for item in input:

if item == ' ':

continue

if item.upper() == item:

upperCount += 1

else:

lowerCount += 1

print(f'No. of Upper-case characters: {upperCount}')

print(f'No. of Lower-case characters: {lowerCount}')

inputStr = 'The quick Brow Fox'

print(f"Input String: '{inputStr}'")

calculateLetterCount(inputStr)

A screenshot of a computer code

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