PYTHON: ASSIGNMENT 02

PROBLEM STATEMENT 1:

Given a list

L : [1,1,1,1,2,2,3,3,3,3,4,5]

Write a program to print only unique elements

Note : Don't convert List to Set

Expected Output

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

Code:

```
def find_unique_elements(lst):
    unique_list = []
    for num in lst:
        if num not in unique_list:
            unique_list.append(num)
    return unique_list
L = [1, 1, 1, 1, 2, 2, 3, 3, 3, 3, 4, 5]
unique_elements = find_unique_elements(L)
print("Unique elements:", unique_elements)
```

```
[15] def find_unique_elements(lst):
         unique_list = []
         for num in lst:
             if num not in unique_list:
                 unique_list.append(num)
         return unique_list
     L = [1, 1, 1, 1, 2, 2, 3, 3, 3, 3, 4, 5]
     unique_elements = find_unique_elements(L)
     print("Unique elements:", unique_elements)
```

```
Unique elements: [1, 2, 3, 4, 5]
```

PROBLEM STATEMENT 2:

Given a list

```
L = [1,2,3,4, [4,3] ]
```

Check if the given number exist in the inner list

EXECUTION:

Case1:

When user input exists in the list

Code:

```
def check_number_existence(lst, number):
    for item in lst:
        if isinstance(item, list):
            if check_number_existence(item, number):
                return True
        elif item == number:
            return True
    return False
L = [1, 2, 3, 4, [3, 4]]

number = int(input("Enter a number to check: "))

exists = check_number_existence(L, number)

if exists:
    print(f"The number {number} exists in the inner list.")
else:
    print(f"The number {number} does not exist in the inner list.")
```

```python
def check_number_existence(lst, number):
    for item in lst:
        if isinstance(item, list):
            if check_number_existence(item, number):
                return True
        elif item == number:
            return True
    return False
L = [1, 2, 3, 4, [3, 4]]

number = int(input("Enter a number to check: "))

exists = check_number_existence(L, number)

if exists:
    print(f"The number {number} exists in the inner list.")
else:
    print(f"The number {number} does not exist in the inner list.")
```

```
Enter a number to check: 4
The number 4 exists in the inner list.
```

Case2:

When user input does not exist in the list

```python
def check_number_existence(lst, number):
    for item in lst:
        if isinstance(item, list):
            if check_number_existence(item, number):
                return True
        elif item == number:
            return True
    return False
L = [1, 2, 3, 4, [3, 4]]

number = int(input("Enter a number to check: "))

exists = check_number_existence(L, number)

if exists:
    print(f"The number {number} exists in the inner list.")
else:
    print(f"The number {number} does not exist in the inner list.")
```

```
Enter a number to check: 6
The number 6 does not exist in the inner list.
```