Nested List

1- Write a program to reverse each row and each column of a given matrix.

```
List = [[1 , 6, 2, 3],[4 , 2, 8, 5], [3 , 1, 9, 0]]
print("After reversing each row:")
for i in List:
    i.reverse()
    for j in i:
        print(j, end="\t")
    print()
print("After reversing each column: ")
List.reverse()
for s in List:
    for z in s:
        print(z, end="\t")
    print()
```

2- Write a program to print the str , int , float , from a given list.

List = [['Ali' , 2.4] , [7.2 , 88 ,'Ahmed'] , [5 , 'omer']]

```
List = [[2, 4.9 ,'Ahmed'],['Ali', 6, 3.5],[2.3 , 'Z']]
string_list = [ ]
int_list = [ ]
float_list = [ ]
for i in List:
    for j in i:
        if type(j)== str:
            string_list.append(j)
        elif type(j)==int:
            int_list.append(j)
        else:
            float_list.append(j)
print(string_list)
print(int_list)
print(float_list)
```

3- Create a matrix with the below elements, then print its transpose.

list =[[3,5,8,1],[4,1,9,3],[2,7,6,4]]

```
list =[[3,5,8,1],[4,1,9,3],[2,7,6,4]]
print("The original List")
for i in list:
    for j in i:
        print(j, end=" ")
    print()
print("The list After transpose ")
for i in range(4):
    for j in range(0,3):
        print(list[j][i],end=" ")
    print()
```

4- Write a program that takes m*n matrix as input from the user and prints the even elements with their corresponding row and column number.

```
list = [ ]
row = int(input("How many rows ? "))
column = int(input("How many columns ? "))
for i in range(row):
    list.append([ ])
    for j in range(column):
        n = int(input(f'Enter a List[{i}]: '))
        list[i].append(n)
for i in range(len(list)):
    for j in range(len(list[i])):
        if list[i][j] % 2 == 0:
            print(list[i][j],"in row ",i,"in column ",j)
```

5- Write a program that takes 3 rows and 4 columns as input from the user and add 10 to each element in the matrix.

```
list=[ ]
for i in range(3):
    list.append([ ])
    for j in range(4):
        list[i].append(input("Enter item : "))
for i in list:
    for j in i:
        print(int(j) + 10,end="   ")
    print()
```