

EXPERIMENT-3

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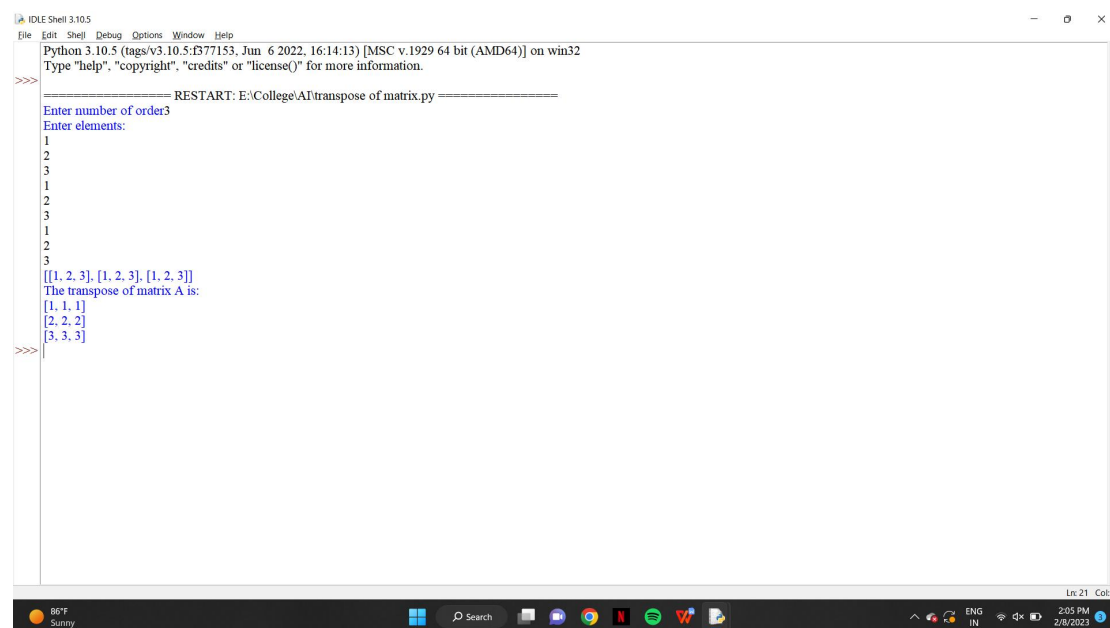
Course: CSA1789 Artificial Intelligence

Q) Write a python program to Transpose a Matrix.

Program:

```
X=[]
n=int(input("Enter number of order"))
print("Enter elements:")
for i in range(n):
    row=[]
    for j in range(n):
        row.append(int(input()))
    X.append(row)
print(X)
transResult = [[0, 0, 0],
                [0, 0, 0],
                [0, 0, 0]]
for a in range(len(X)):
    for b in range(len(X[0])):
        transResult[b][a] = X[a][b]
print("The transpose of matrix A is: ")
for res in transResult:
    print(res)
```

OUTPUT:



```
IDLE Shell 3.10.5
Python 3.10.5 (tags/v3.10.5:f377153, Jun 6 2022, 16:14:13) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
RESTART: E:\College\AI\transpose of matrix.py
Enter number of order: 3
Enter elements:
1
2
3
1
2
3
1
2
3
[[1, 2, 3], [1, 2, 3], [1, 2, 3]]
The transpose of matrix A is:
[1, 1, 1]
[2, 2, 2]
[3, 3, 3]
>>>
```