Centurion University
Shaping Lives... Empowering Communities...

School: ..... Campus: .....

Academic Year: ..... Subject Name: ..... Subject Code: .....

Semester: ..... Program: ..... Branch: ..... Specialization: .....

Date: .....

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiement : Multiply Two csc_matrix Matrices

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

```
import numpy as np
from scipy.sparse import csc_matrix

# Create first csc matrix A
row_A = np.array([0, 0, 1, 2])
col_A = np.array([0, 1, 0, 1])
data_A = np.array([4, 3, 8, 9])
csc_A = csc_matrix((data_A, (row_A, col_A)), shape=(3, 3))

print("First CSC Matrix:\n", csc_A.toarray())

# Create second csc matrix B
row_B = np.array([0, 1, 1, 2])
col_B = np.array([0, 0, 1, 0])
data_B = np.array([7, 2, 5, 1])
csc_B = csc_matrix((data_B, (row_B, col_B)), shape=(3, 3))

print("Second CSC Matrix:\n", csc_B.toarray())

# Element-wise multiplication
result = csc_A.multiply(csc_B)
print("Element-wise Multiplication Result:\n", result.toarray())
```


*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* Implementation Phase: Final Output (no error)

```
First CSC Matrix:
 [[4 3 0]
 [8 0 0]
 [0 9 0]]
Second CSC Matrix:
 [[7 0 0]
 [2 5 0]
 [1 0 0]]

Element-wise Multiplication Result:
 [[28  0  0]
 [16  0  0]
 [ 0  0  0]]
```

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	**50**		

Signature of the Student:

Name :

Regn. No. :

Signature of the Faculty:

As applicable according to the experiment. Two sheets per experiment (10-20) to be used.