Database Relations

Schemes:

snap(S, N, A, P)
csg(C, S, G1, G2)

name → name: snap
Header →

name: snap

S	N	A	P
'12345'	Charlie	'12 Apple St.'	'555-1234'
'67890'	'Lucy'	'34 Pear Ave'	'555-5678'

name → name: csg
Header →

name: csg

C	S	G1	G2
'CS 101'	'12345'	'A'	'A'
'EE 200'	'33333'	'B'	'A'

Facts:

snap('12345, 'Charlie, '12 Apple St.' , '555-1234')
snap(''67890', 'Lucy, '34 Pear Ave' , '555-5678')
csg('CS 101', '12345', 'A')
csg('EE 200', '33333', 'B')

Tuple (snap row 1)
Tuple (snap row 2)
Tuple (csg row 1)
Tuple (csg row 2)

Rules: Ignore for now - project 4

Queries:

snap(S, n, '12 Apple St.', Y)? →

Is there any tuples in snap where:
S = anything in first column
n = anything in second column
'12 Apple St.' = third column value is '12 Apple St'
Y = anything in fourth column

snap('12345', 'Lucy', A, B)? →

Is there any tuples in snap where:
'12345' = first column value is '12345'
'Lucy' = second column value is 'Lucy'
A = anything in the third column
B = anything in fourth column

csg(A, B, C, 'A')? →

Is there any tuples in snap where:
A = anything in first column
B = anything in second column
C = anything in the third column
'A' = fourth column value is 'A'

csg(L, D, X, X)? →

Is there any tuples in snap where:
L = anything in first column
D = anything in second column
X = anything in the third column
X = anything in the fourth column that also equals the value in the third column (they are both X)!

csg(J, J, J, J)? →

Is there any tuples in snap where:
J = anything in the first column
J = anything in the second column that is equal to the first column
J = anything in the third column that is equal to the first column (only need to compare first instance of the variable, they will all end up the same that way anway)
J = anything in the fourth column that is equal to the first column

Output

Yes (1)! Where:
S = '12345', n = 'Charlie', Y = '555-1234'

No

Yes (2)! Where:
A = 'CS 101', B = '12345', C = 'A'
AND
A = 'EE 200', B = '33333', C = 'B'

Yes (1)! Where:
L = 'CS 101', D = '12345', X = 'A'

No