

COSC 202 Exam 10/9/2025 - Page 2 of 4

Name/Username: _____

Question 4: For each part of this question, please assume that the hash table is in the state shown below. For parts A, B and J, please answer the question. For the other parts, I give you a name and a collision resolution strategy. For parts C through I, tell me the index where the name will be inserted, with the given collision resolution strategy. Please assume that Hash-1 is used as the primary hash function, and for double-hashing, that Hash-2 is the second hash function.

0	"Matthew Feminism"
1	
2	
3	
4	
5	"Ava Kumquat"
6	"Katelyn Chaotic"
7	"Jacob Disrupt"
8	
9	"Michael Edt"
10	"Parker Youthful"
11	"Jake Crease"
12	"Lillian Margaret"
13	"Dylan Pergamon"
14	"William Cbs"
15	"Gavin Promise"
16	
17	
18	"Gabriel Depositary"
19	"Bailey Coordinate"
20	"John Hildebrand"
21	"Riley Fleece"
22	
23	
24	
25	"Tyler Noah Linemen"
26	"Dylan Span"
27	"Lily Blaine"
28	"Lauren Grant MD"
29	
30	"Sofia Mileage"
31	"Jonathan Dusenbury"
32	"Nathan Chugging"
33	"Elizabeth Nightingale"
34	"David Isaac Gym"
35	"Zachary Cod MD"
36	
37	
38	
39	"Alexander Thrust"
40	
41	"Daniel Dylan Bellicose"
42	"Brianna Storehouse"
43	"Jordan Drugging"
44	"Gabriel Gaines"
45	"Sophie Gibby"
46	"Mia Koenigsberg"
47	"Daniel Kinesic"
48	"Sophia Silicon"
49	"Cole Institution Esq"

Name	Hash-1	Hash-2
"Aaron Fissure"	3818932375	2352745531
"Alexis Schoolteacher"	966872783	821367599
"Avery Deferrable"	1015759896	2653687521
"Benjamin Portico"	1304980905	1650693533
"Brayden Muddle"	2838785605	520164725
"Charlotte Inhomogeneity"	422460394	3730033443
"Chloe Fain"	2437549742	3748573369
"Claire Antacid"	672955753	3774295583
"Emily Salt"	1657241337	2526073239
"Emma Anarchy"	1238480427	2663896399
"Gabriel Close"	2633167633	2873646507
"Kaitlyn Psychoanalysis"	2300350715	1359851629
"Morgan Ignoble"	3337672969	2869016387
"Nicholas Commissary"	4037266845	3784850733
"Owen Bantam MD"	265026210	3450816853
"Samantha Espousal"	2325473022	3602697523
"Savannah Nuclide"	961322489	3514980601
"William Percy"	3568861143	3486101241

Q4A: What is the load factor of this table?

You may give a fraction: _____

Q4B: Is this a good load factor? Answer Y or N: _____

Q4C: "Nicholas Commissary", Quadratic Probing: _____

Q4D: "William Percy", Linear Probing: _____

Q4E: "Samantha Espousal", Linear Probing: _____

Q4F: "Benjamin Portico", Linear Probing: _____

Q4G: "Gabriel Close", Double Hashing: _____

Q4H: "Emma Anarchy", Quadratic Probing: _____

Q4I: "Owen Bantam MD", Double Hashing: _____

Q4J: In the table above, there is one name which is impossible to insert into the table with double-hashing. What is that name?
(You should be able to answer this quickly.
If not, skip it, and move on):
