

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	"Leah Behind MD"
1	
2	
3	"Sofia Wotan"
4	
5	"Alexis Antecedent"
6	"Connor Barge"
7	"Riley Barter"
8	"Ryan Featherbrain"
9	"Carter Multi"
10	"Matthew Taboo"
11	"Mia Phrase"
12	
13	"Austin Adieu"
14	"Zoey Prophetic"
15	"Peyton Abundant"
16	"Suzy Etude"
17	"Wyatt Tyler Biharmonic"
18	
19	"Christian Coda"
20	"Jake Ptarmigan PhD"
21	"Savannah Pius MD"
22	"Charlie Newlywed"
23	"Carson Swath IV"
24	"Emily Aqueduct"
25	"Eva Pemmican"
26	"Landon Attorney"
27	"Molly Flat"
28	"Audrey Idyllic"
29	
30	"Brianna Chromatograph"
31	"Avery Not"
32	
33	
34	"Luke Hassle"
35	"Ava Lapse"
36	"Elijah Joshua Exeter"
37	
38	"Cooper Conjugate III"
39	
40	"Elizabeth Them"
41	"Gavin Irreconcilable"
42	
43	"Avery Quake"
44	
45	
46	
47	"Morgan Transparent"
48	"Kaitlyn Trevelyan"
49	"Luke Austin Sony"

Name	Hash-1	Hash-2
"Amelia Cognate"	4193470511	2923041557
"Charlie Eli Fatuous"	3576926366	1773866167
"Chase Carleton"	2067375105	3354878257
"Christopher Titillate"	2540337020	3221493827
"Eva College"	2515584028	1872682207
"Hannah Scheme"	3696226248	3381612259
"Isabelle Keyes Esq"	2866043024	1103660507
"Jonathan Contentious"	4269490483	2279653561
"Jordan Yugoslav III"	2544017976	2746040763
"Kayla Moon"	2437941840	1226913689
"Mackenzie Skyrocket"	1594326555	3584681891
"Maya Rumpus"	2334252185	2297352425
"Mia Exigent"	990310448	874404823
"Michael Chautauqua"	2225817034	240622377
"Morgan Constraint Esq"	3485384375	2408714027
"Sophia Oxcart"	191479578	3850887449
"Tristan Wack"	62113904	3317662907
"Tyler Encomium"	1378840114	391770363

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: "Mia Exigent", Linear Probing: _____

Q4D: "Chase Carleton", Double Hashing: _____

Q4E: "Michael Chautauqua", Linear Probing: _____

Q4F: "Eva College", Double Hashing: _____

Q4G: "Christopher Titillate", Quadratic Probing: _____

Q4H: "Hannah Scheme", Quadratic Probing: _____

Q4I: "Tristan Wack", Linear Probing: _____

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):
