

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	"Mason Sough"
1	
2	"Brooke Caldwell"
3	"Natalie Flint"
4	"Sarah Prologue"
5	"Emma Dusk"
6	
7	"Sydney Prof"
8	"Emma Shore"
9	
10	"Landon Sigmund"
11	
12	"Layla Drool"
13	
14	"Victoria Mossy"
15	"Liam"
16	"Avery Standpoint"
17	"Jacob Penalty"
18	"Julia Inexcusable MD"
19	"Samuel Uphold"
20	
21	"Eli Gunshot"
22	
23	"Katelyn Dung"
24	"Claire Narragansett"
25	"Jake Mop"
26	"Nathan Vermilion"
27	
28	"Owen Coachmen"
29	"Layla Sundown"
30	"Joshua Sharpshoot"
31	
32	
33	
34	
35	"Lily Receptor"
36	"Molly Merciful"
37	
38	
39	"Luke Myocardium PhD"
40	"Avery Snick"
41	"Sofia Chenille"
42	"Kayla Contrast"
43	"Sofia Clock"
44	"Lilly Morton"
45	"Katelyn Nepenthe"
46	
47	"Landon Riboflavin"
48	"Henley Lavoisier"
49	"Andrew Faber"

Name	Hash-1	Hash-2
"Brayden Laramie"	1427932325	3391580529
"David Pluggable"	3882207104	4129412339
"David Summary"	1180120155	623016143
"Emma Meld"	2599283751	2295659753
"Fred Thermostat"	3862317361	87683071
"Hunter"	3092640155	1612803957
"Ian Backside"	617301491	6283783
"Jacob Glucose"	3150494582	875363421
"Jordan Intervene"	1632398323	1410840925
"Landon Urban"	2065857529	3675474567
"Madeline Pouch"	1567392547	1315089219
"Madelyn Tight"	3172826639	2164564757
"Noah Headphone"	3566346167	1963412647
"Paige Bet"	1745757542	1738850557
"Sophia Pupil"	2219453843	3130321267
"Sophie Actuarial MD"	438022260	3226963607
"Tristan McGinnis"	957566530	582607861
"Xavier Imperceivable"	3253606028	2379243263

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: "Sophia Pupil", Quadratic Probing: _____

Q4D: "Madeline Pouch", Linear Probing: _____

Q4E: "Xavier Imperceivable", Linear Probing: _____

Q4F: "Brayden Laramie", Quadratic Probing: _____

Q4G: "Madelyn Tight", Double Hashing: _____

Q4H: "Paige Bet", Double Hashing: _____

Q4I: "Emma Meld", 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):
