

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	"Mackenzie"
1	"Sofia Sightseeing"
2	"Daniel Rattle"
3	"Samantha Gedanken"
4	"Nicholas Marvelous"
5	"Madelyn Commissariat"
6	"Makayla Bald"
7	"Christian Jealousy"
8	
9	"Eva Bois"
10	"Elizabeth Carpathia"
11	
12	
13	"Owen Festival"
14	"Alexis Stall"
15	
16	"Isabelle Penetrable"
17	"Henley Republic"
18	"Thomas Stepson"
19	
20	
21	
22	"Sofia Viewport"
23	
24	"Paige Stoke"
25	"Thomas Pokerface"
26	"Mason Erickson"
27	
28	"James Roberts"
29	"Grace Rothschild"
30	"Landon Precambrian"
31	"Brooke Turtleback"
32	
33	
34	
35	"Madison Barnard"
36	"Charlotte Gleam"
37	"Leah Cornish"
38	"Hannah Thimble"
39	"Lauren Reap"
40	"Chloe Catch"
41	"Makayla Profligacy"
42	"Chase Caleb Combustible"
43	
44	"James Invertible"
45	"Allison Goddard"
46	"Luke Cleveland"
47	"Nathan Stairwell"
48	"Liam Dolan"
49	"Liam Bismarck"

Name	Hash-1	Hash-2
"Alexandra William"	3925626148	3560726007
"Aubrey Canoga"	2959695414	1228890753
"Avery Jan"	3713258565	776194607
"Brianna Hastings MD"	2206579314	25188007
"Charlie Csnnet"	610956122	3408087741
"Claire Western"	2962728125	2108177317
"Connor Audit"	3439541963	528827107
"Dontonio Freer"	262459907	4153045063
"Elizabeth Hobby"	691009521	2924091437
"Gavin Paradoxic"	3941275285	1165364163
"Isaiah Cutlass"	2051498099	2269455325
"John Pacemake"	4285467883	2481105389
"Lillian Suppression"	3208824373	3440233399
"Logan Xavier Temptress"	3014974124	2489468877
"Madison Haitian"	220758638	641650299
"Makayla Domain"	3355377469	2130016559
"Michael Angular"	4165495746	2600414581
"Zachary Ottoman"	3428355097	218420591

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: "Aubrey Canoga", Double Hashing: _____

Q4D: "Makayla Domain", Linear Probing: _____

Q4E: "Claire Western", Quadratic Probing: _____

Q4F: "Alexandra William", Linear Probing: _____

Q4G: "Logan Xavier Temptress", Linear Probing: _____

Q4H: "Michael Angular", Quadratic Probing: _____

Q4I: "Brianna Hastings 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):
