

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	"Daniel Embargo"
1	"Bella Jockstrap"
2	
3	"Evan Salesmen"
4	"Emma Beryl"
5	
6	"Bella Circumvention"
7	"Mia Orthodontist"
8	
9	"Aiden Counterargument"
10	"Taylor Yugoslavia"
11	"Xavier Scythe"
12	"Logan Pay"
13	
14	
15	"Zoey Santo"
16	"Zoe Boa PhD"
17	"Samantha Lecture"
18	"Suzy Gilchrist"
19	
20	"Ellie Brisk"
21	"Paige Noose"
22	"Jackson John Treasure"
23	"Jackson Travel"
24	"Lucy Nigeria"
25	
26	
27	
28	"Aidan Strap"
29	"Oliver Sobriquet"
30	
31	"Jackson Forensic"
32	"Hailey Stonehenge"
33	"Isabella Peroxide"
34	"Madelyn Imperfect"
35	
36	"Suzy Nietzsche"
37	"Dylan Asunder"
38	"Allison Custodian"
39	"Daniel Excite"
40	
41	"Kate Receptive"
42	"Sydney Plummet"
43	"Charlotte Sowbelly"
44	
45	"Jack Nitrogen"
46	
47	"Austin Culbertson"
48	"Nathan Nuance"
49	"David Pancho"

Name	Hash-1	Hash-2
"Aiden Deferral"	3287600747	2637680197
"Alexandra Plead"	3320157467	3778113383
"Chase Film"	2657025649	3664626359
"David Content"	1758098472	2134575937
"Elizabeth Aperture"	3054661061	4218712523
"Hunter Blythe"	2904257123	3704119153
"Isabelle Pyrex"	1255616638	666222701
"Julian Norway"	2917346632	2308041843
"Lillian Delicatessen"	697652734	2023075429
"Mackenzie Intolerant"	3925051132	2571834357
"Noah Quasicontinuous"	3824796133	2379883079
"Oliver Boom"	3756827107	3186844193
"Ryan Abundant"	1578735212	3182624331
"Sophia Brice"	2202735310	3180192657
"Sydney Sniffly"	1604365820	150747625
"Thomas Prince"	2376261714	3465522191
"Wyatt Ester"	2299494849	1383386667
"Zoe For"	500958874	4256690721

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: "Julian Norway", Linear Probing: _____

Q4D: "Aiden Deferral", Quadratic Probing: _____

Q4E: "Mackenzie Intolerant", Double Hashing: _____

Q4F: "Wyatt Ester", Quadratic Probing: _____

Q4G: "Thomas Prince", Linear Probing: _____

Q4H: "Chase Film", Linear Probing: _____

Q4I: "Hunter Blythe", 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):
