

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 Quack"
1	
2	"Jonathan Hangover"
3	
4	"Elizabeth Stroboscopic"
5	
6	
7	"John Sworn"
8	"Lilly Blacksmith PhD"
9	"Chase Implementor"
10	
11	
12	"Layla Periscope"
13	"Amelia Customhouse"
14	"Lillian Europe"
15	
16	"Brooke Miocene"
17	"Victoria Hippopotamus"
18	"Liam Oliver"
19	"Jacob Bachelor"
20	
21	"Molly Complement"
22	"Benjamin Tenney"
23	"Christian Substitute"
24	"Leah Davies"
25	"Lucas Sonic"
26	"Aiden Nile"
27	"Gabriella Windshield"
28	"Lillian Burden"
29	"Isabelle Bona"
30	"Dontonio Easel"
31	"Dylan Placater"
32	"Amelia Vertigo"
33	
34	"Hunter Edwina"
35	
36	"Gabriella Typhoid"
37	
38	
39	"Ryan Brody Hettie"
40	"Isaac Elijah Prolate"
41	"Adam Fuzz"
42	"Luke Elk"
43	"Connor Mcdougall"
44	"John Loquacious"
45	
46	
47	"Lily Flout"
48	"Brooke Jupiter Esq"
49	"Ian Cassette"

Name	Hash-1	Hash-2
"Allison Roar"	170254123	2270451325
"Anthony Mortician"	3798409132	3347125557
"Audrey Piccadilly"	3029929997	3050805443
"Elijah Sodden"	1585772271	3413338981
"Isaac Cent"	1236464528	4087728097
"Jayden Florence"	3935263374	625290777
"John Horseflesh"	3508286855	1169721061
"Jonathan Tibia"	947805985	3188303379
"Lillian Genotype"	2798080053	3893746587
"Lilly Rhodolite"	2836213013	1920535419
"Lily Jacksonian"	2533405248	1471800707
"Lucy Hypertensive"	1197566440	534368829
"Madeline Repertoire"	503600869	3111377469
"Sarah Hierarchy"	2850662707	713809757
"Sofia Applicable"	2952877348	3192364399
"William Matron"	1686238853	2242095337
"Wyatt Ruminant"	4078288492	2836329729
"Zachary Accordant"	423400326	569446069

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: "Sarah Hierarchy", Linear Probing: _____

Q4D: "Lily Jacksonian", Double Hashing: _____

Q4E: "Isaac Cent", Quadratic Probing: _____

Q4F: "Anthony Mortician", Double Hashing: _____

Q4G: "Sofia Applicable", Linear Probing: _____

Q4H: "Jonathan Tibia", Linear Probing: _____

Q4I: "Lucy Hypertensive", Quadratic 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):
