

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	"Audrey Soffit"
1	"Alex Relish"
2	"Anthony Stater"
3	
4	
5	"Jack Batik"
6	"Dontonio Syrupy"
7	"Christian Immortal"
8	
9	"Joseph Raid"
10	"Audrey Dwarves"
11	"Morgan Voltaire"
12	"Aubrey Deepen"
13	"Dontonio Ridden"
14	"James Zebra"
15	
16	"William Fillip III"
17	"Aiden Octahedron"
18	"Zoe Alicia"
19	"Brooklyn Bibb"
20	
21	
22	
23	
24	"Eli Diode"
25	"Kaylee Hutchison"
26	
27	"Layla Algaecide"
28	
29	"Kate Preempt"
30	"Isabella Inner"
31	"Sarah Feed"
32	"Victoria Gem"
33	"Maya Abode"
34	
35	"Nathan Jocose Jr"
36	"Charlie Ceremonial"
37	"Jacob Preparatory"
38	
39	"Mason Sedulous"
40	"Charlotte Soothsayer"
41	"Jack Mood"
42	
43	"Daniel Hegelian"
44	"Carter Caldera"
45	"Cooper Marketeer"
46	"Parker Apace"
47	
48	"Maya Satin"
49	"Hailey Ping"

Name	Hash-1	Hash-2
"Alexander Malaprop"	89996245	119271577
"Anna Hideaway"	4158220879	3787879917
"Bella Impresario"	1507314112	3570524949
"Carson Bet"	1008245446	252014237
"Daniel Scuba"	1698882016	3771484489
"David Pull"	3495105962	2065904631
"Gabriel Eager PhD"	789634491	2228931263
"Hunter Circuitry"	136019609	1174971119
"Jack Fibrosis"	3607610431	791420571
"Lily Shreveport"	4212173169	2037558025
"Mackenzie Gases"	3279341807	952939487
"Madelyn Flute"	3156347183	436318473
"Michael Petticoat"	2536981509	1351968307
"Ryan Newlywed"	1223826606	925848509
"Ryan Ruminant"	2987194349	807608423
"Sarah Hayward Esq"	1636828333	3647529807
"Taylor Downstairs"	3832701870	3123733303
"Wyatt Freest"	2906296551	1131687973

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: "Taylor Downstairs", Linear Probing: _____

Q4D: "Jack Fibrosis", Linear Probing: _____

Q4E: "Michael Petticoat", Double Hashing: _____

Q4F: "Alexander Malaprop", Quadratic Probing: _____

Q4G: "Bella Impresario", Quadratic Probing: _____

Q4H: "Ryan Ruminant", Linear Probing: _____

Q4I: "Ryan Newlywed", 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):
