

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	"Lucas Ostracism"
1	
2	"Anna Juniper"
3	"Savannah Noticeable"
4	"Emma Incendiary"
5	"Sophie Bondholder"
6	"Zoey Rebutted"
7	
8	
9	
10	"Lily Sextuple"
11	"Elizabeth Exhilarate"
12	
13	"Chase Aversion"
14	"Fred Humanoid Esq"
15	"Parker Rise"
16	"Suzy Buss"
17	"Benjamin Continued"
18	"Abigail Remember"
19	
20	
21	"Jack Cameron Notch"
22	
23	"Kaitlyn Vexatious"
24	"Julia Daunt"
25	"Tristan Itt"
26	
27	"Emily Ass"
28	"Alexander Morphology"
29	"Anna Leonardo"
30	"Owen Goad"
31	
32	
33	"Kaylee Syllabic"
34	"Eva Flexural"
35	"Luke Asphyxiate"
36	
37	
38	"Lily Blazon"
39	
40	"Arianna Rendezvous"
41	"Mia Locomotor"
42	"Audrey Airspeed"
43	
44	"Alexis Botswana"
45	"Fred Bothersome"
46	"Katelyn Perquisite"
47	"Isaiah Newell"
48	"Cole Tranquil"
49	"Max Presto"

Name	Hash-1	Hash-2
"Aidan Littleneck"	2827767249	1329947157
"Ava Gallop"	3198726428	2420238557
"Brooke Pocketbook"	2877973848	455534111
"Carson Belgium Esq"	3728788441	3906848243
"Cole Usury"	567208144	2648409589
"Cooper Summit"	2550292588	143437625
"Cooper Titrate"	3385592554	950775919
"Gabriel Matthew Catholicism"	2108124677	1379273423
"Gabriella Cutback"	1971579717	1574053357
"Isaac Justify"	176653236	3953479207
"Jack Scientist"	356129108	2240596439
"Jordan Hinterland"	451405036	1762179079
"Joseph Scat"	1697658297	4061636051
"Logan Badland"	3201253116	1907278937
"Mason Spline"	3657413934	992407309
"Molly Alveoli"	2763754014	2963799803
"Nicholas Delphinium"	1601314021	1659180437
"Xavier Scull"	645407831	1143503429

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: "Aidan Littleneck", Linear Probing: _____

Q4D: "Gabriella Cutback", Quadratic Probing: _____

Q4E: "Brooke Pocketbook", Quadratic Probing: _____

Q4F: "Mason Spline", Double Hashing: _____

Q4G: "Xavier Scull", Linear Probing: _____

Q4H: "Logan Badland", Linear Probing: _____

Q4I: "Molly Alveoli", 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):
