

Assignment 2 Part 2

Started: 4 Mar at 15:38

Quiz instructions

Assignment 2 handout [cs3223_assign2.pdf \(https://canvas.nus.edu.sg/courses/38601/files/1098446?wrap=1\)](https://canvas.nus.edu.sg/courses/38601/files/1098446?wrap=1)  (https://canvas.nus.edu.sg/courses/38601/files/1098446/download?download_frd=1)

This is an **individual assignment** to be submitted by each student.

Answer the following five questions based on the results of your query plan executions.



Question 1

2 pts

Choose all the statements that are true about your results for Part A.

- ☐ IS-cb accessed fewer index pages than BIS-cb.
- ☐ IS-cb accessed more index pages than BIS-cb.
- ☒ Both IS-cb and BIS-cb accessed the same number of index pages.
- ☐ The bitmap heap scan did not reduce the number of heap pages scanned. Due to the overhead incurred by the bitmap heap scan, IS-cb outperformed BIS-cb.
- ☒ The bitmap heap scan reduced the number of heap pages scanned, and BIS-cb outperformed IS-cb.



Question 2

2 pts

Choose all the statements that are true about your results for Part B.

- ☐ BIS-c performed the best.
- ☒ IOS-cb performed the best.
- ☐ IS-c performed the best.
- ☐ BIS-c performed the worst.

☐ IOS-cb performed the worst.

☒ IS-c performed the worst.



Question 3

2 pts

Let N_b , N_c , and N_{cb} , denote, respectively, the number of leaf data entries that satisfy the primary conjuncts of Query C with respect to the indexes b_idx , c_idx , and cb_idx .

Choose all the statements that are true about your results for Part C.

☐ $N_b < N_{cb}$.

☒ $N_b > N_{cb}$.

☐ $N_c < N_{cb}$.

☒ $N_c > N_{cb}$.

☒ BIS-cb outperformed ABIS-b-c.

☐ ABIS-b-c outperformed BIS-bb.



Question 4

2 pts

Let N_b , N_c , and N_{cb} , denote, respectively, the number of leaf data entries that satisfy the primary conjuncts of Query D with respect to the indexes b_idx , c_idx , and cb_idx .

Choose all the statements that are true about your results for Part D.

☐ $N_b < N_c$

☒ $N_b > N_c$

☐ $N_b < N_{cb}$

☒ $N_b > N_{cb}$

☐ Nc < Ncb

☒ Nc > Ncb

☐ SS performed the worst

☒ IS-b performed the worst

☐ IS-c performed the worst

☐ IS-cb performed the worst

☐ BIS-b performed the worst

☐ BIS-c performed the worst

☐ BIS-cb performed the worst

☐ ABIS-b-c performed the worst



Question 5

2 pts

Write an instance of Query E such that the plan IS-b outperforms the plan BIS-cb in terms of the average execution time.

Your answer must be of the form: `select * from r where b OPb Vb and c OPc Vc`

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`select * from r where b = 9 and c > 0`

p



11 words



Saved at 16:03

Submit quiz