

- Describe any design decisions you made with a little more details. If you used something other than a nested-loops join, describe the tradeoffs of the algorithm you chose.

the tuple deletion and the insertion must be executed in bufferpool, and the steps are first check if the page is in the table., and then delete the page using the delete function implemented in HeapPage.java. the insertion function works as the same logic

- Discuss and justify any changes you made to the API.

i implemented the markSlotUsed function in the API

- Describe any missing or incomplete elements of your code.

all code completed

- Describe how long you spent on the assignment, and whether there was anything you found particularly difficult or confusing.

It takes 7 days to complete the assignment, differences if the insert and deletion function between bufferpool.java and heapPage.java were hard to understand.