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2. Internal Record Format
- Show your record format design and describe how your design satisfies O(1) field access. If not, just mention that you haven't implemented this feature.
To satisfy O(1) field access, we simply find out the offset from the beginning of the file to the beginning of the target record by having running sum to the beginning of each record. Then, we read out the data that belongs to the record. Based on the page number included the RID, the offset from the beginning of the file to the beginning of the target page can be found by page number * PAGE_SIZE. Then, we find out the offset to the beginning of the record by the vector which has stored the offset of each record. By summing up the offset of records before the target record, the offset to the beginning of the target record can be found. By adding it to the page offset, the offset from the beginning of the file to the record can be find. Also, the offset of the record can also be found in the vector. Having those offset information, we can pinpoint and access the data.

- Describe how you store a VarChar field.
When we store a new record, the bytes which contain the size of the actual data and the actual data itself, will be written and flushed to the disk. While the record is read and found out the type of attribute is VarChar, the first 4 bytes of the attribute would be used to find out the variable length of the actual data. Therefore, the actual data can be correctly offset.

3. Page Format
- Show your page format design
Each page is allocated a fixed size, PAGE_SIZE. The pages are in sorted order and the first page is at the beginning of the file. In each of the page, the records are stored in inserted order from beginning of the page. The records can be variable length but the total size of the records will not be greater than PAGE_SIZE. In each of record, the order of the attribute is same as it is stored.

4. Implementation Detail
- Other implementation details go here.
In order to quickly access pinpoint the record in file, a slot directory is created for each page. It contains the information about the page number of the directory, the amounts of record in the page, the offsets of each record, and the offset to the beginning of the free space in the page.

5. Other (optional)
- Freely use this section to tell us about things that are related to the project 1, but not related to the other sections (optional)
Test 10 failed we may be leaking too much data, here is the error.
*** Error in `./rbftest': free(): corrupted unsorted chunks: 0x00000000019944c0 ***
Yes we did not keep up on valgrind sorry.