

* How records are organized in a file

- ① Ordered files / Sequential
 - ↳ Binary search possible
- ② Unordered / Heap
 - ↳ Linear search

* 1 sector of HDD can have

Records
of some
table

Records of
different table

⇓
Useful for
JOINS

* When a block is read, data is transferred to RAM.

* If Two tables that are related stored in same sector, Query processing will be faster

* Database Buffer

A major goal of the database system is to minimize the number of block transfers between the disk and memory. One way to reduce the number of disk accesses is to keep as many blocks as possible in main memory. The goal is to maximize the chance that, when a block is accessed, it is already in main memory, and, thus, no disk access is required.

Since it is not possible to keep all blocks in main memory, we need to manage the allocation of the space available in main memory for the storage of blocks. The **buffer** is that part of main memory available for storage of copies of disk blocks. There is always a copy kept on disk of every block, but the copy on disk may be a version of the block older than the version in the buffer. The subsystem responsible for the allocation of buffer space is called the **buffer manager**.