



# File Organization

- Heap file: records stored according to their inserted order, and retrieved sequentially. This is the most basic and general form of file organization.
- Direct file: the record address is mapped through hash function according to some attribute's value.
- Indexed file: index + heap file/cluster
- Dynamic hashing: p115
- Grid structure file: p118 (suitable for multi attributes queries)
- Raw disk (notice the difference between the logical block and physical block of file. You can control physical blocks in OS by using raw disk)



# Index Technique

- B+ Tree (✓ ✓)
- Clustering index (✓)
- Inverted file
- Dynamic hashing
- Grid structure file and partitioned hash function
- Bitmap index (used in data warehouse)
- Others