

External Sort

- memory usage calculations
- don't read/write values individually
- use only one temporary file at most
- one entry in the heap per run, not per value

Buffer Manager

- avoid race conditions or data races
- don't hold locks during I/O
- only write pages when they are evicted

Slotted Pages

B-Tree

Operators

- allocation of registers, don't call `get_output()` repeatedly
- duplicates on the left side in HashJoin
- don't materialize tuples in HashAggregation
- implement `IntersectAll` and `ExceptAll` with characteristic function

Expressions