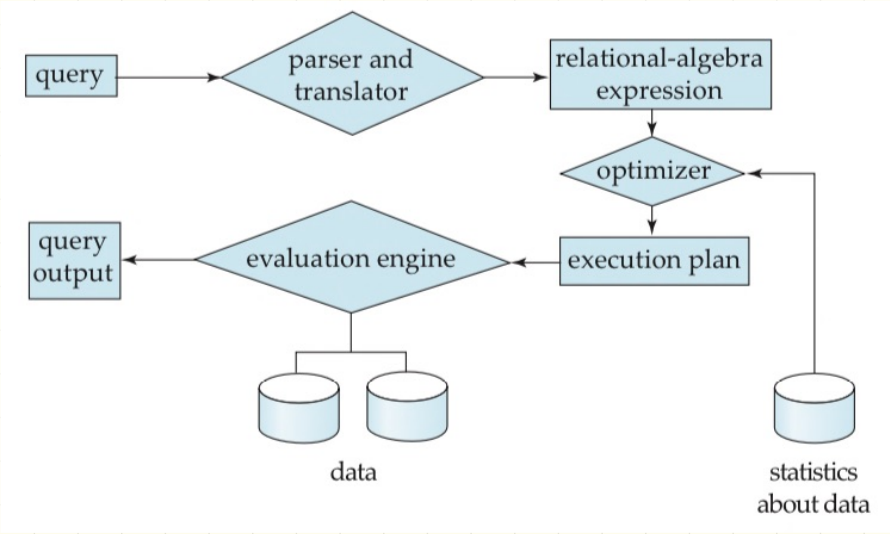
Querying

9/8

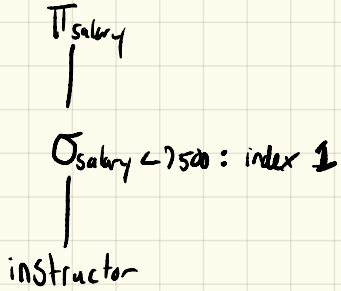



```
select salary
from instructor
where salary < 7500
```

$\sigma_{salary < 7500}(\Pi_{salary}(instructor))$

* $\Pi_{salary}(\sigma_{salary < 7500}(instructor))$

evaluation plan - given relational alg ops annotate w/ instruction on how to evaluate



query-execution plan: seq of prim ops to evaluate the query

query-execution engine: takes a plan, executes plan, returns answer

query opt - pick plan w/ minimal cost from all competing plans

Measure the cost ⇐ focus for now

* - disk access
- ram/cache size/usage
- processor usage
* - communication

Simplified model
- # of blocks transfered from disk
- # of disk seeks ← t_S avg block access time

↑ t_T avg # of seconds to transfer a block

⇒ transfer b blocks w/ S seeks

⇒ $b * t_T + S * t_S$ ← 1-10 ms disks ← 10s nanoseconds w/ ram