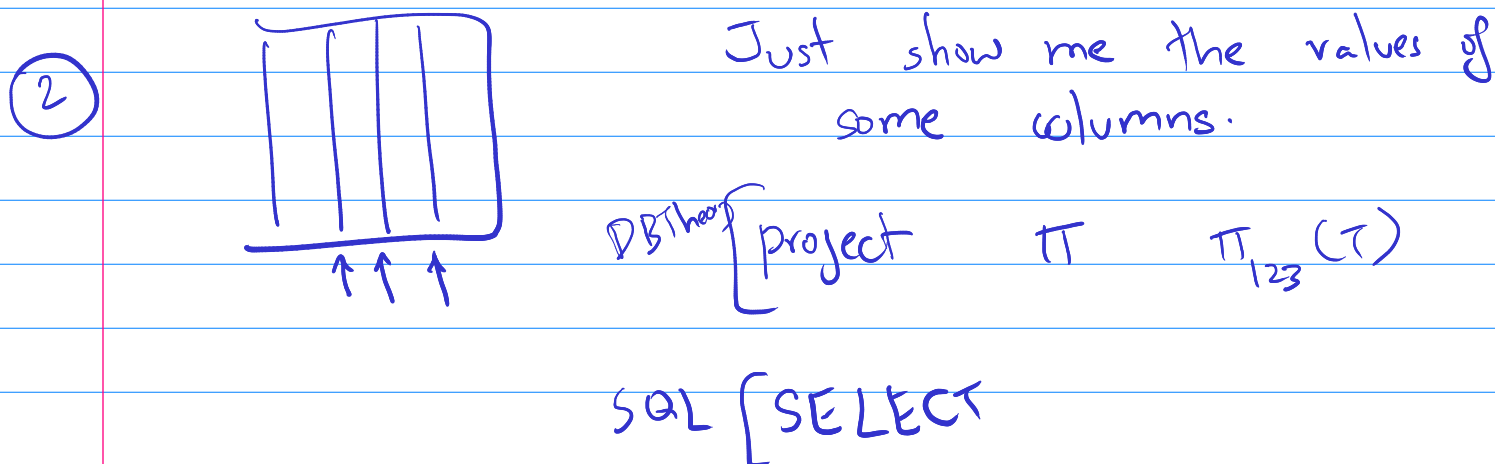
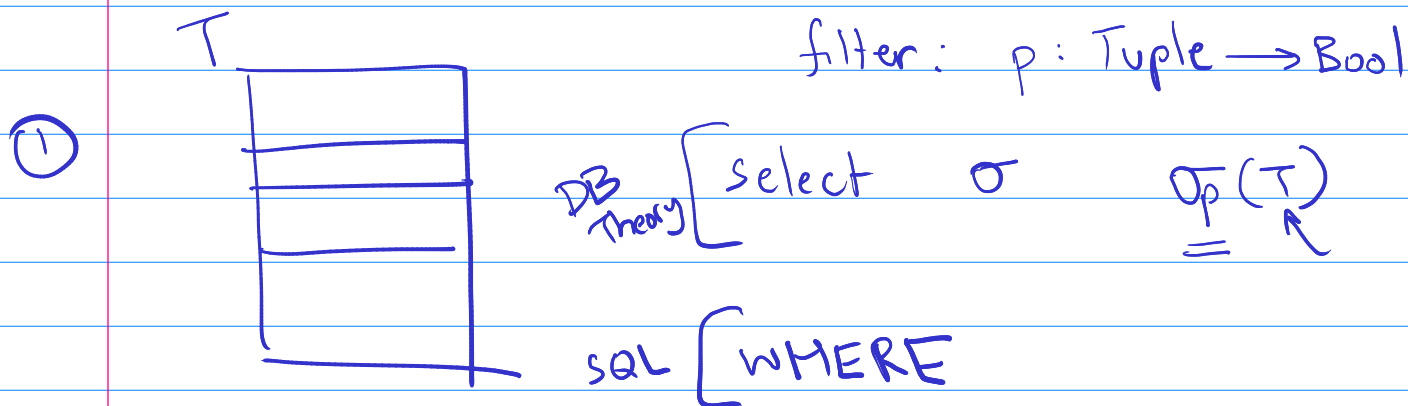
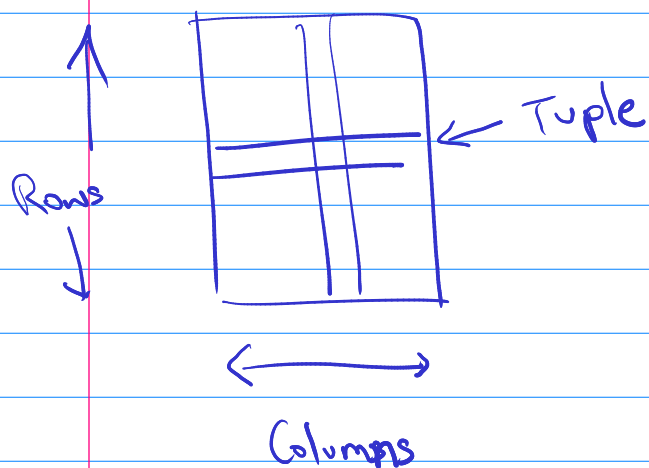


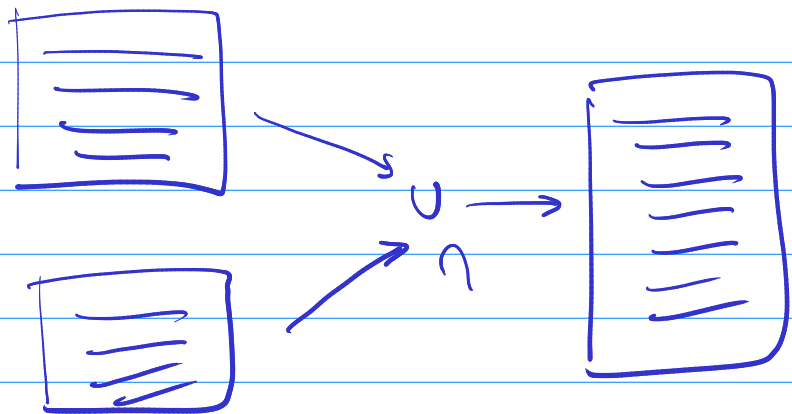
Quiz 2: Max: 76 Median: 70 Avg: 66.6

Relational Programming

Spreadsheets → Relational
Algebra
Relational
databases
SQL



③ UNIONS

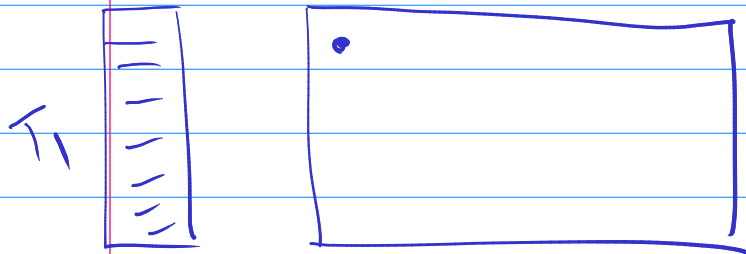


④

T_2

$T_1 \times T_2$

Cartesian product



Each row of T_1 ,
each row of T_2 :
attach them together.

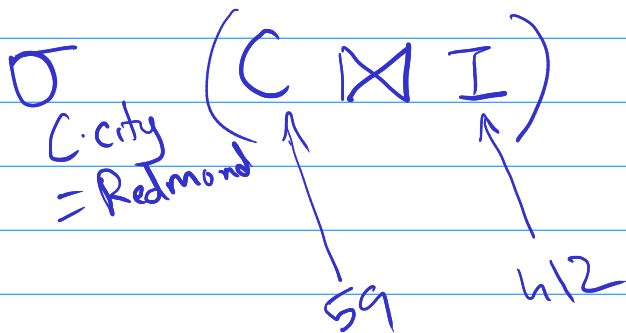
$\sigma_{l.\text{artistid} = r.\text{artistid}}$ (Album $\times$ Artist)
 l r

Join

Album

$\bowtie$

Artist



59 x 412

optimization
selection
pushdown.

