

Exercise 3

1. SELECT DISTINCT sname
FROM Students
INNER JOIN Registration ON Students.sid=Registration.sid AND
Courses.cid=Registration.cid
WHERE Courses.cid=107 AND percent>90

RA:

$$\begin{aligned} &\delta \\ &\pi_{\text{sname}} \\ &\sigma_{\text{courses . cid} = 107 \text{ AND percent} > 90} (\text{students} \bowtie_{\text{students . sid} = \text{registration . sid}} \text{registration}) \end{aligned}$$

2. SELECT COUNT(sid)
FROM Students
INNER JOIN Registration ON Students.sid=Registration.sid AND
Courses.cid=Registration.cid
WHERE Courses.cid=Registration.cid AND percent>=75

RA:

$$\begin{aligned} &\pi_{\text{COUNT (sid)}} \\ &\gamma_{\text{COUNT (sid)}} \\ &\sigma_{\text{courses . cid} = \text{registration . cid} \text{ AND percent} \geq 75} (\text{students} \bowtie_{\text{students . sid} = \text{registration . sid}} \text{registration}) \end{aligned}$$

3. SELECT *
FROM Students
INNER JOIN Registration ON Students.sid=Registration.sid AND
Courses.cid=Registration.cid
WHERE COUNT(sid)<=2

RA:

$\sigma_{\text{COUNT}(\text{sid}) \leq 2} (\text{students} \bowtie_{\text{students} . \text{sid} = \text{registration} . \text{sid} \text{ AND } \text{courses} . \text{cid} = \text{registration} . \text{cid}} \text{registration})$