

6-14-2017

Examples from 4notes15

Example 1

MovieStar (name,address,gender,birthdate)

How do we express FD: name \rightarrow address

- $(\text{MovieStar (MS1)} \bowtie_{\text{MS1.name=MS2.name AND MS1.address} \neq \text{MS2.address}} \text{MovieStar (MS2)}) = \emptyset$

Example 2

Student(ID, name, address, GPA, SAT)

Campus(location, enrollment, rank)

Apply(ID, location, date, major, decision)

An application must be tied to an existing student.

- $\pi_{ID} (\text{Apply}) - \pi_{ID} (\text{Student}) = \emptyset$
- $\pi_{ID} (\text{Apply}) \subseteq \pi_{ID} (\text{Student})$

A campus must have non-zero enrollment.

- $\sigma_{\text{enrollment}=0} (\text{Campus}) = \emptyset$