

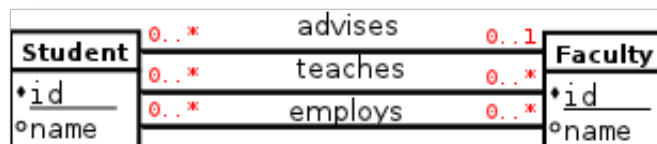
CS386 Homework 5

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1

a. ERD with cardinality constraints:¹



Relational Schema for this ERD:

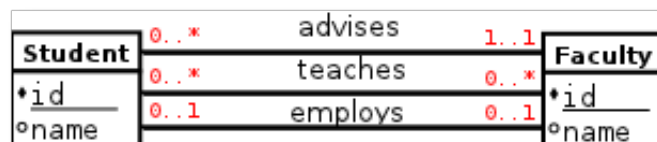
Student(id, name, advisor) advisor references Faculty.id

Faculty(id, name)

Teachers(faculty_id, student_id) faculty_id references Faculty.id, student_id references Student.id

Employments(faculty_id, student_id) faculty_id references Faculty.id, student_id references Student.id

b. ERD with cardinality constraints:



Relational Schema:

Student(id, name, advisor, employer) advisor not null and references Faculty.id, employer references Faculty.id

Faculty(id, name, employee) employee references Student.id

Teachings(faculty_id, student_id) faculty_id references Faculty.id, student_id references Student.id

¹ERDs drawn using Dia. <http://projects.gnome.org/dia/>
Edited with the GIMP [GNU Image Manipulation Program]

2

Person

- a. $id \rightarrow ssn, name, phone$
 $ssn \rightarrow name$
- b. $id, ssn \rightarrow id$
 $id, ssn \rightarrow ssn$
 $id, name \rightarrow name$
 $id, phone \rightarrow phone$
- c. *none*
- d. *none*
- e. *none*