جامعة الملك سعود
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Extra Exercises On Relational Mapping

CSC380

1. Map the following ERs to Relational Schema

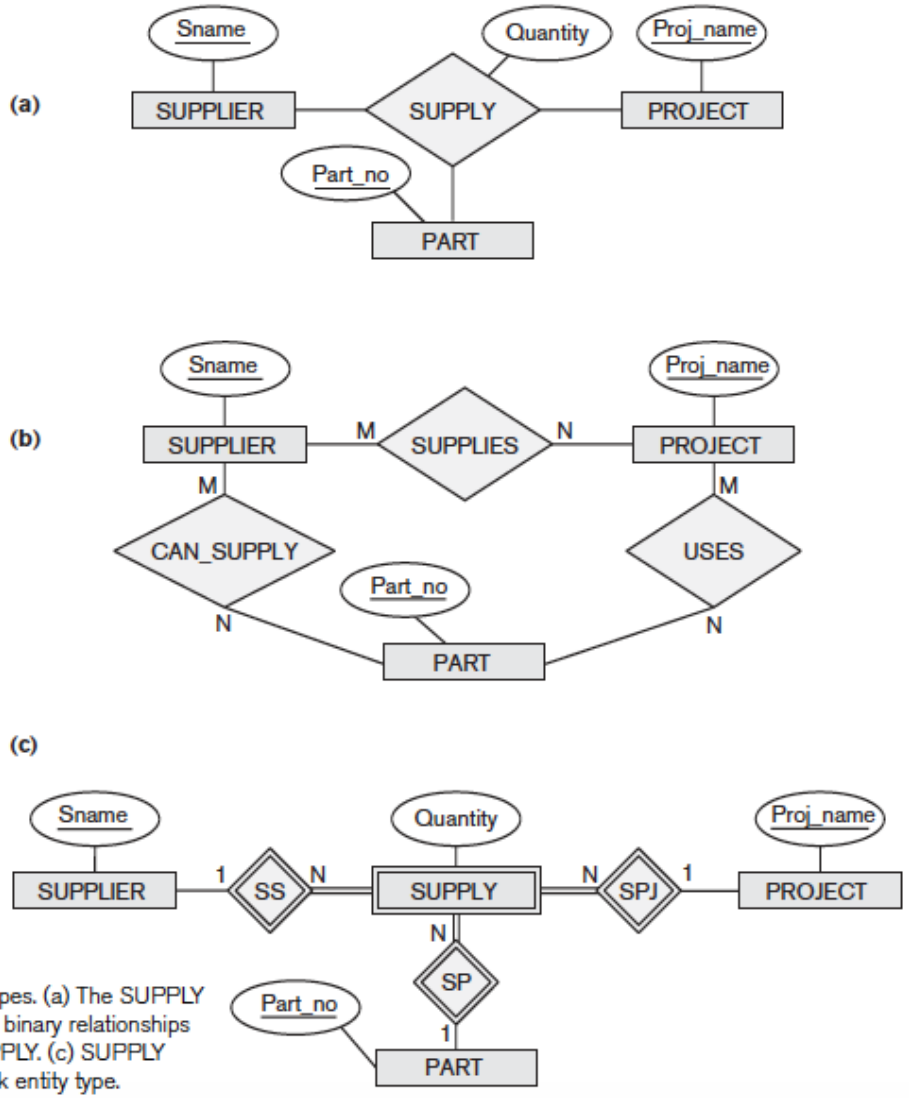


Figure 7.17
Ternary relationship types. (a) The SUPPLY relationship. (b) Three binary relationships not equivalent to SUPPLY. (c) SUPPLY represented as a weak entity type.

Let's Map (a) the ternary relationship

(a)

SUPPLIER(Sname);

PROJECT(Proj_name);

PART(Part_no);

SUPPLY(Sname, Part_no, Proj_name, Quantity);

Let's Map (b) the three binary relationship

(b)

SUPPLIER(Sname);

PROJECT(Proj_name);

PART(Part_no);

SUPPLIES(Sname, Proj_name);

CAN_SUPPLY_PARTS(Sname, Part_no);

USES_PARTS(Proj_name, Part_no);

Let's Map (c) the ternary relationship as a week entity

(c)

SUPPLIER(Sname);

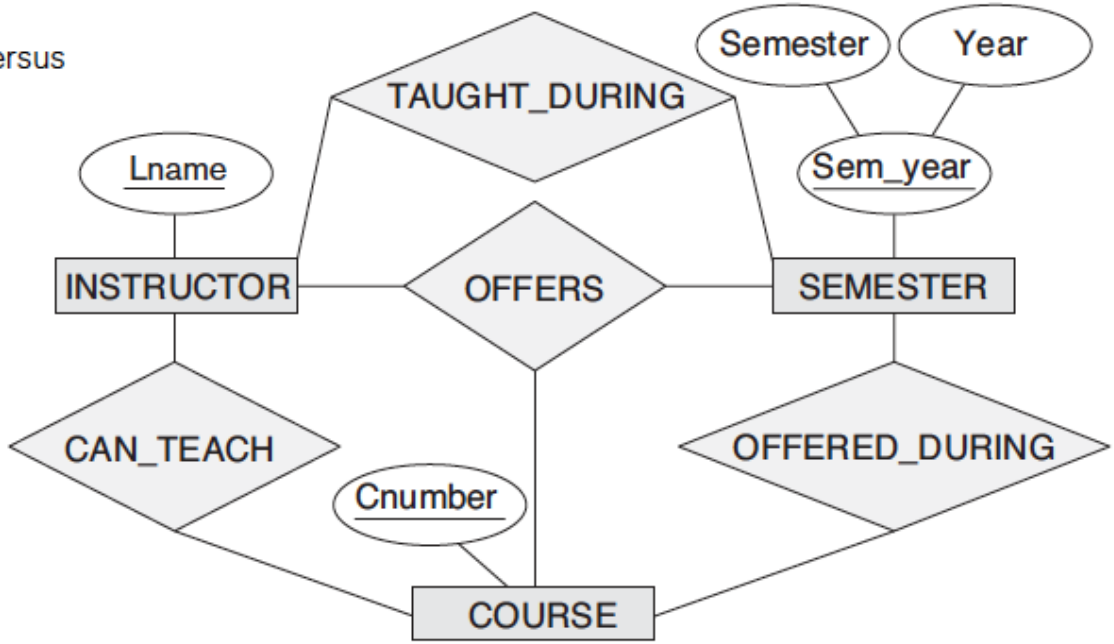
PROJECT(Proj_name);

PART(Part_no);

SUPPLY(Sname, Part_no, Proj_name, Quantity);

2. Map the following ERs to Relational Schema

Figure 7.18
Another example of ternary versus binary relationship types.



2.

INSTRUCTOR(Lname);

SEMESTER(Semester, Year);

COURSE(Cnumber);

INS_TAUGHT_DURING_SEM(Lname, Semester, Year);

INS_CAN_TEACH_COURSE(Lname, Cnumber);

COURS_OFFERED_DURING_SEM(Cnumber, Semester, Year);

OFFERS(Lname, Semester, Year, Cnumber);

3. Figure 9.8 shows an ER schema for a database that can be used to keep track of transport ships and their locations for maritime authorities. Map this schema into a relational schema and specify all primary keys and foreign keys

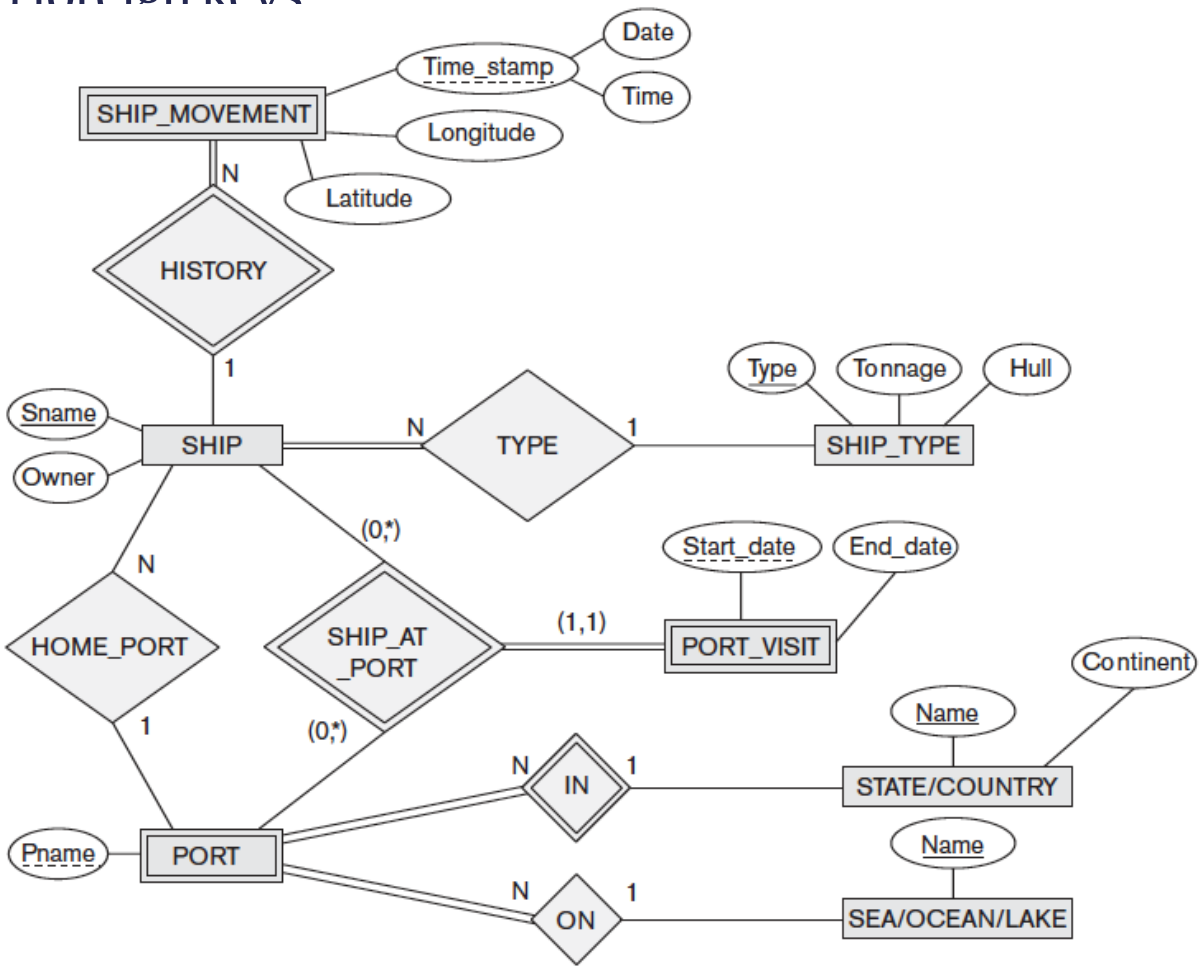


Figure 9.8
An ER schema for a SHIP_TRACKING database.

3. Figure 9.8 shows an ER schema for a database that can be used to keep track of transport ships and their locations for maritime authorities. Map this schema into a relational schema and specify all primary keys and foreign keys.

SHIP(SNAME, OWNER, TYPE, PNAME);

SHIP_TYPE(TYPE, TONNAGE, HULL);

STATE_COUNTRY(NAME, CONTINENT);

SEAOCEANLAKE(NAME);

SHIP_MOVEMENT(SSNAME, DATE, TIME,

LONGITUDE, LATITUTE);

PORT(S_C_NAME, PNAME, S_O_L_NAME);

VISIT(VSNAME, VPNAME, STARTDATE, ENDDATE);

Questions?