

Aim:- To map ER/EER to Relational schema model for company Database

Theory:- Rules of ER to relational mapping

1) Mapping of regular entity types

For each strong entity type E in ER schema, create a relation R that includes all the simple attributes of E . Form a primary key from the attributes

2) Mapping of weak entity types

For each weak entity type W in ER schema with owner entity type E create a relation R and include all simple attributes of W as attributes of R

3) Mapping of binary 1:1 relation

For each binary 1:1 relationship R in ER, identify the relations S and T that corresponds to the entity types participating in R . There are three possible approaches.

1) Foreign Key approach

2) Merged relation operation

3) Cross-reference of relationship relation option

4) Mapping of binary 1:N relation

For each regular binary 1:N relationship type R , identify relation S that represent the participating entity type at the N -side of relationship type

5) Mapping of binary M:N condition

For each regular binary M:N type R create a new relation S to represent R . Include as foreign key attribute in S the primary key of relation that represents participating entity types

EMPLOYEE

Fname	mname	lname	<u>ssn</u>	DOB	Salary	Addr	Sex	Super ssn	Dept no.
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DEPARTMENT

Dept name	<u>Dept no.</u>	Mgr ssn	Mgr start date
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DEPARTMENT LOCATION

<u>Dept no</u>	<u>Dept location</u>
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PROJECT

Pname	<u>Pnumber</u>	P location	Dept no
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WORKS ON

<u>Essn</u>	<u>Pnumber</u>	Hours
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Dependant

<u>Essn</u>	<u>Dependant name</u>	Sex	D.O.B	Relationship
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9) Mapping multivalued attributes

Multivalued attribute becomes another table in the relational schema.

The primary key of its parent table will become a part of composite primary key comprising itself and primary table's attribute.

10) Mapping of composite attributes

Only the leaf / composite / child attributes of a composite attribute will become a column of respective table.

Conclusion

Hence, we have successfully mapped the relational schema model for company database.