Module -10

The assignment for Module 10 involves problems for schema conversion. Problems 1 to 4 involve the ERD in Figure 1.



Figure 1: ERD for Problems 1 to 4

Solution:

Table Name – Institution

Primary key- InstID

other columns- InstName, InstM ascot

Table Name – Student

Primary key – StdNo

other columns – StdName, StdAddress, StdCity, StdState, StdZip, StdEmail

Table Name- Lender

Primary Key – LenderNo

other columns- LenderName

Table Name – Loan

Primary Key – Loan No

Foreign Key- InstID, StdNo, LenderNo

other columns- ProcDate, DisbMethod, DisbBank, DateAuth, NoteValue, Subsidized, Rate

Table Name – Disburse Line

Primary key – Loan No, DateSent

Foreign Key- Loan No

Other columns- Amount, OrigFee, GuarFee

Conversion Rules:

Use Entity type conversion rule for all entity

Use 1-M relationship conversion except for Disburse Line Table Name

Use Identification dependency rule for Disburse Line Table Name

Primary key will be combination of dependence Table Name and child Table Name - Loan No, DateSent

No Application M-N relation for this Problem

5. Convert the ERD shown in Figure 2 into Table Names. List the conversion rules used and Table Name design. For each Table Name, you should list the primary key, foreign keys, other columns, and NOT NULL constraints for foreign keys if necessary. You do not need to write CREATE TABLE NAME statements.



Solution:

Table Name – Account

Primary key- Acctid

Foreign Key – Account.Acctid

Other columns- AcctName, Balance

Conversion:

Entity type conversion for account table

1-M relationship conversion with reference key as Account.Acctid

6. Convert the ERD shown in Figure 3 into tables. List the conversion rules used and table design. For each table, you should list the primary key, foreign keys, other columns, and NOT NULL constraints for foreign keys if necessary. You do not need to write CREATE TABLE statements.



Figure 3: ERD for Conversion Problem 6

Solution:

Table Name – Owner

Primary Key – OwnId

Other columns – OwnName, Own Phone

Table Name – Shares

Primary key – OwnID,PropID

Foreign Key – OwnId, PropId

Other Columns – Start Week, End Week

Table Name – Property

Primary Key – PropID

Other columns – BldgName, UnitNo, Bdrms

Conversion rules:

Entity type conversion rule for all entity

M-N relationship conversion – Shares table with combined Foreign keys