By : Saumyadip Mandal

Answers Of Module 10

Ans 1:

**Student** (StdNo, StdName, StdAddress, StdCity, StdState, StdZip, StdEmail)

**Institution** (InstID, InstName, InstMascot)

**Loan** (LoanNo, ProcDate, DisbMethod, DisbBank, DateAuth, NoteValue, Subsidized, Rate)

**Lender** (LenderNo, LendName)

**DisburseLine** (DateSent, Amount, OriFee, GuarFee)

Ans 2:

**Student** (StdNo, StdName, StdAddress, StdCity, StdState, StdZip, StdEmail)

**Institution** (InstID, InstName, InstMascot)

**Loan** (LoanNo, ProcDate, DisbMethod, DisbBank, DateAuth, NoteValue, Subsidized, Rate, StdNo, InstID, LenderNo)

FOREIGN KEY(StdNo) REFERENCE **Student**

FOREIGN KEY(InstID) REFERENCE **Institution**

FOREIGN KEY(LenderNo) REFERENCE **Lender**

StdNo NOT NULL

InstID NOT NULL

LenderNo NOT NULL

**Lender** (LenderNo, LendName)

**DisburseLine** (DateSent, Amount, OriFee, GuarFee)

FOREIGN KEY(LoanNo) REFERENCE **Loan**

LoanNo NOT NULL

Ans 3:

**Student** (StdNo, StdName, StdAddress, StdCity, StdState, StdZip, StdEmail)

**Institution** (InstID, InstName, InstMascot)

**Loan** (LoanNo, ProcDate, DisbMethod, DisbBank, DateAuth, NoteValue, Subsidized, Rate, StdNo, InstID, LenderNo)

FOREIGN KEY(StdNo) REFERENCE **Student**

FOREIGN KEY(InstID) REFERENCE **Institution**

FOREIGN KEY(LenderNo) REFERENCE **Lender**

StdNo NOT NULL

InstID NOT NULL

LenderNo NOT NULL

**Lender** (LenderNo, LendName)

**DisburseLine** (DateSent, Amount, OriFee, GuarFee)

FOREIGN KEY(LoanNo) REFERENCE **Loan**

LoanNo NOT NULL

1. Use entity type rule to convert each entity type.
2. Use 1-M relationship for all relationships.
3. M-N relationship rule is not applicable here.

Ans 4:

**Student** (StdNo, StdName, StdAddress, StdCity, StdState, StdZip, StdEmail)

**Institution** (InstID, InstName, InstMascot)

**Loan** (LoanNo, ProcDate, DisbMethod, DisbBank, DateAuth, NoteValue, Subsidized, Rate, StdNo, InstID, LenderNo)

FOREIGN KEY(StdNo) REFERENCE **Student**

FOREIGN KEY(InstID) REFERENCE **Institution**

FOREIGN KEY(LenderNo) REFERENCE **Lender**

StdNo NOT NULL

InstID NOT NULL

LenderNo NOT NULL

**Lender** (LenderNo, LendName)

**DisburseLine** (DateSent, Amount, OriFee, GuarFee)

FOREIGN KEY(LoanNo) REFERENCE **Loan**

LoanNo NOT NULL

1. Use entity type rule to convert each entity type.
2. Use 1-M relationship for all relationships.
3. M-N relationship rule is not applicable here.
4. Use the identification dependency rule to make LoanNo a component of the primary key of **DisburseLine**. The primary key of the DisburseLine table is combination of LoanNo and DataSent. A not null constraint is not needed for **DisburseLine**. LoanNo is used because it is part of primary key of **DisburseLine**.

Ans 5:

**Account** (Acctid,decAccNo,AcctName,Balance)

FOREIGN KEY (decAccNo) REFRENCES **Account**

Conversion Rules :

1. Use the entity type rule to convert the entity type.
2. Use the 1-M relationship rule for the decomposed relationship.

Ans 6:

**Owner** (OwnId,OwnName,OwnPhone)

**Property** (PropId,BldgName,UnitNo,Bdrms)

Shares (OwnId,PropId,StartWeek,EndWeek)

FORIEGNKEY (OwnId) REFERENCES **Owner**

FORIEGNKEY (PropId) REFERENCES **Property**

Conversion Rules:

1. Use the entity type rule to convert the entity type.
2. Use the M-N rule to convert the **Shares** relationship.