# Solution for Module 10

1. **entity type rule**

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, OrigFee, GuaraFee)

1. **1-M relationship rule**

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

Institution ( InstID, InstName, InstMascot)

Lender ( LenderNo, LendName)

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

FOREIGN KEY(StdNo) REFERENCES Student

FOREIGN KEY(InstID) REFERENCES Institution

FOREIGN KEY(LenderNo) REFERENCES Lender

StdNo NOT NULL

InstID NOT NULL

LenderNo NOT NULL

DisburseLine ( DateSent, LoanNo, Amount, OrigFee, GuaraFee)

FOREIGN KEY(LoanNo) REFERENCES Loan

1. **M-N relationship rule**

Not required

1. **identifying relationship rule**

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

Institution ( InstID, InstName, InstMascot)

Lender ( LenderNo, LendName)

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

FOREIGN KEY(StdNo) REFERENCES Student

FOREIGN KEY(InstID) REFERENCES Institution

FOREIGN KEY(LenderNo) REFERENCES Lender

StdNo NOT NULL

InstID NOT NULL

LenderNo NOT NULL

DisburseLine ( DateSent, LoanNo, Amount, OrigFee, GuaraFee)

FOREIGN KEY(LoanNo) REFERENCES Loan

LoanNo is made a component of PK of DisburseLine.

1. Entity type rule

1-M relationship rule for decomposed relationship

Account(AcctId, decAcctNo, AcctName, Balance)

FOREIGN KEY(decAcctNo) REFERENCES Account

1. Entity type rule

M-N relationship rule for Shares relationship

Owner(OwnId, OwnNamem OwnPhone)

Property(PropId, BldgName, UnitNo, Bdrms)

Shares(OwnId, PropId, StartWeek. EndWeek)

FOREIGN KEY(OwnId) REFERENCES Owner

FOREIGN KEY(PropId) REFERENCES Property