2401960435 – Reynaldy Sentosa – UTS DBSys.

1. Cardinality: Total Rows (Tuples) = 3. Degree: Total Columns (Attributes) = 7.

2. σPrice > 1000000 (Item).

3.1. dan 3.2. File Terpisah dan Terlampir dalam Zip.

3. 3.

BEGIN TRAN

CREATE DATABASE VisLib

COMMIT ROLLBACK

--USE VisLib

BEGIN TRAN

CREATE TABLE Member(

MemberId CHAR(7) PRIMARY KEY

CHECK(MemberId LIKE 'G[0-9][0-9]

[0-9][0-9][0-9][0-9]'),

IdCardNumber CHAR(13) NOT NULL

CHECK(IdCardNumber LIKE '[0-9][0-9][0-9][0-9][0-9]

[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),

MemberName VARCHAR(255) NOT NULL,

MemberType VARCHAR(6) NOT NULL

CHECK(MemberType LIKE 'Gold' OR

MemberType LIKE 'Silver'),

MemberDOB DATE NOT NULL,

MemberAddress VARCHAR(255) NOT NULL,

MemberPhone CHAR(12) NOT NULL

CHECK(MemberPhone LIKE '0[0-9][0-9][0-9]

[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]')

)

COMMIT ROLLBACK

BEGIN TRAN

CREATE TABLE Operator(

OperatorId CHAR(4) PRIMARY KEY

CHECK(OperatorId LIKE 'OP[0-9][0-9]'),

OperatorName VARCHAR(255) NOT NULL

)

COMMIT ROLLBACK

BEGIN TRAN

CREATE TABLE Book(

BookId VARCHAR(10) PRIMARY KEY

CONSTRAINT BookId\_OldConst

CHECK(BookId LIKE '00000[0-9]

[0-9][0-9][0-9][0-9]' OR

BookId LIKE 'AU[0-9][0-9][0-9]'),

BookTitle VARCHAR(255) NOT NULL,

Edition INT NOT NULL,

Isn VARCHAR(10) NOT NULL

CHECK(Isn LIKE '97[7-9][0-9][0-9]

[0-9][0-9][0-9][0-9][0-9]' OR

Isn LIKE '97[7-9][0-9][0-9]

[0-9][0-9][0-9][0-9]'),

AudioBook VARCHAR(13) NOT NULL

CHECK(AudioBook LIKE 'Available' OR

AudioBook LIKE 'Not Available')

)

COMMIT ROLLBACK

BEGIN TRAN

CREATE TABLE BorrowHeader(

MemberId CHAR(7) PRIMARY KEY

REFERENCES Member(MemberId)

ON UPDATE CASCADE

ON DELETE CASCADE,

OperatorId CHAR(4) NOT NULL

REFERENCES Operator(OperatorId)

ON UPDATE CASCADE

ON DELETE CASCADE,

LoanDate DATE NOT NULL,

PickUpFee INT NOT NULL,

ReturnDate DATE NOT NULL,

ReturnDay VARCHAR(9) NOT NULL,

DeliveryFee INT NOT NULL

)

COMMIT ROLLBACK

BEGIN TRAN

CREATE TABLE BorrowDetail(

MemberId CHAR(7)

REFERENCES BorrowHeader(MemberId)

ON UPDATE CASCADE

ON DELETE CASCADE,

BookId VARCHAR(10)

REFERENCES Book(BookId)

ON UPDATE CASCADE

ON DELETE CASCADE,

Qty INT NOT NULL,

BookCondition VARCHAR(12) NOT NULL

CHECK(BookCondition LIKE 'As new' OR

BookCondition LIKE 'Fine' OR

BookCondition LIKE 'Very good' OR

BookCondition LIKE 'Good' OR

BookCondition LIKE 'Fair' OR

BookCondition LIKE 'Poor' OR

BookCondition LIKE 'Ex-library' OR

BookCondition LIKE 'Book club' OR

BookCondition LIKE 'Binding copy'),

PRIMARY KEY(MemberId, BookId)

)

COMMIT ROLLBACK

3. 4.

BEGIN TRAN

ALTER TABLE Book

DROP CONSTRAINT BookId\_OldConst

COMMIT ROLLBACK

BEGIN TRAN

ALTER TABLE Book

ADD CONSTRAINT BookId\_NewConst

CHECK(BookId LIKE 'PBV[0-9][0-9][0-9][0-9]' OR

BookId LIKE 'AU[0-9][0-9][0-9]')

COMMIT ROLLBACK

3. 5. <https://www.loom.com/share/d3f14eca8eb04167a7b04834ee770ebe>