

Table Statements

CREATE TABLE USER

(Username VARCHAR(15) **NOT NULL**,
Password VARCHAR(20) **NOT NULL**,
PRIMARY KEY (Username));

CREATE TABLE STAFF

(Username VARCHAR(15) **NOT NULL**,
PRIMARY KEY (Username),
FOREIGN KEY (Username) **REFERENCES** User(Username)
ON DELETE CASCADE **ON UPDATE** CASCADE);

CREATE TABLE STUDENT_FACULTY

(Username VARCHAR(15) **NOT NULL**,
Name VARCHAR(30) **NOT NULL**,
DOB DATE **NOT NULL**,
Email VARCHAR(30) **NOT NULL**,
IsDebarred BOOLEAN **NOT NULL**,
Gender CHAR **NOT NULL**,
Address VARCHAR(30),
IsFaculty BOOLEAN **NOT NULL**,
Penalty DECIMAL(5, 2) **NOT NULL**,
Dept VARCHAR(30),
PRIMARY KEY (Username),
FOREIGN KEY (Username) **REFERENCES** User(Username)
ON DELETE CASCADE **ON UPDATE** CASCADE);

CREATE TABLE BOOK

(ISBN CHAR(9) **NOT NULL**,
Title VARCHAR(30) **NOT NULL**,
Cost DECIMAL(5, 2) **NOT NULL**,
IsReserved BOOLEAN **NOT NULL**,
Edition INT **NOT NULL**,
PubliPlace VARCHAR(15) **NOT NULL**,
Publisher VARCHAR(15) **NOT NULL**,
CopyYr DECIMAL(4, 0) **NOT NULL**,
ShelfID INT,
SubName VARCHAR(30),
PRIMARY KEY (ISBN),
FOREIGN KEY (ShelfID) **REFERENCES** SHELF(ShelfID)
ON DELETE SET NULL **ON UPDATE** CASCADE,
FOREIGN KEY (SubName) **REFERENCES** SUBJECT(SubName)
ON DELETE SET NULL **ON UPDATE** CASCADE);

CREATE TABLE BOOKCOPY

(ISBN CHAR(9) **NOT NULL**,
CopyID INT **NOT NULL**,
IsChecked BOOLEAN **NOT NULL**,
IsHold BOOLEAN **NOT NULL**,
IsDamaged BOOLEAN **NOT NULL**,
FuRequester VARCHAR(15),
PRIMARY KEY (ISBN, CopyID),
FOREIGN KEY (ISBN) **REFERENCES** BOOK(ISBN)
ON DELETE CASCADE **ON UPDATE** CASCADE);

CREATE TABLE AUTHOR

(ISBN CHAR(9) **NOT NULL**,

Author VARCHAR(15) **NOT NULL**,
PRIMARY KEY (ISBN, Author),
FOREIGN KEY (ISBN) **REFERENCES** BOOK(ISBN)
ON DELETE CASCADE **ON UPDATE** CASCADE);

CREATE TABLE ISSUE
(Username VARCHAR(15) **NOT NULL**,
ISBN CHAR(9) **NOT NULL**,
CopyID INT **NOT NULL**,
IssueID CHAR(9) **UNIQUE**,
ExtenDate DATE **NOT NULL**,
IssueDate DATE **NOT NULL**,
ReturnDate DATE **NOT NULL CHECK** (ReturnDate >= ExtenDate),
NumExten INT **NOT NULL CHECK** (NumExten <= 5),
PRIMARY KEY (Username, (ISBN, CopyID)),
FOREIGN KEY (Username) **REFERENCES** STUDENT_FACULTY(Username)
ON DELETE CASCADE **ON UPDATE** CASCADE,
FOREIGN KEY (ISBN) **REFERENCES** BOOKCOPY(ISBN)
ON DELETE CASCADE **ON UPDATE** CASCADE,
FOREIGN KEY (CopyID) **REFERENCES** BOOKCOPY(CopyID)
ON DELETE CASCADE **ON UPDATE** CASCADE);

CREATE TABLE FLOOR
(FloorID INT **NOT NULL**,
NumAssistant INT **NOT NULL**,
NumCopier INT **NOT NULL**,
PRIMARY KEY (FloorID));

CREATE TABLE SHELF
(ShelfID INT **NOT NULL**,
FloorID INT,
AisleID INT **NOT NULL**,
PRIMARY KEY (ShelfID),
FOREIGN KEY (FloorID) **REFERENCES** FLOOR(FloorID)
ON DELETE SET NULL **ON UPDATE** CASCADE);

CREATE TABLE SUBJECT
(SubName VARCHAR(30) **NOT NULL**,
FloorID INT,
NumJournal INT **NOT NULL**,
PRIMARY KEY (SubName),
FOREIGN KEY (FloorID) **REFERENCES** FLOOR(FloorID)
ON DELETE SET NULL **ON UPDATE** CASCADE);

CREATE TABLE KEYWORD
(SName VARCHAR(30) **NOT NULL**,
Keyword VARCHAR(15) **NOT NULL**,
PRIMARY KEY (SName, Keyword),
FOREIGN KEY (SName) **REFERENCES** SUBJECT(SubName)
ON DELETE CASCADE **ON UPDATE** CASCADE);