**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);