**create** **table** users (username **varchar**(20) **not** **null**, password **varchar**(40) **not** **null**, usertype **varchar**(20), **primary** **key** (username));

create table categories(category varchar(20) not null, primary key (category));

CREATE TABLE Books (bid VARCHAR(20) NOT NULL, title VARCHAR(60) NOT NULL, author VARCHAR(40) NOT NULL, yearPublished INT NOT NULL, price INT NOT NULL, isbn VARCHAR(10) NOT NULL, pageNumber INT NOT NULL, category VARCHAR(20) NOT NULL, publisher VARCHAR(40) NOT NULL, image VARCHAR(100) NOT NULL, PRIMARY KEY(bid), foreign key (category) references categories);

create table reviews (username varchar(20) not null, bid varchar(20) not null, rating int, comments varchar(250), primary key (username, bid), foreign key (username) references users, foreign key (bid) references books);

create view featured (bid, title, author, yearpublished, price, isbn, pagenumber, category, publisher, image, booktype,averageRating) as

(SELECT b.bid, title, author, yearpublished, price, isbn, pagenumber, category, publisher, image, booktype, avg(r.rating) as averageRating FROM books b, reviews r where b.bid=r.bid group by b.bid, title,author,yearpublished,price,isbn,pagenumber,category,publisher,image,booktype order by averageRating desc);

CREATE TABLE billaddress (

bill\_id int NOT NULL GENERATED ALWAYS AS IDENTITY (START WITH 1, INCREMENT BY 1),

username VARCHAR(20) NOT NULL,

street VARCHAR(100) NOT NULL,

province VARCHAR(20) NOT NULL,

country VARCHAR(20) NOT NULL,

zip VARCHAR(20) NOT NULL,

phone VARCHAR(20),

PRIMARY KEY(bill\_id)

);

CREATE TABLE shipaddress (

ship\_id int NOT NULL GENERATED ALWAYS AS IDENTITY (START WITH 1, INCREMENT BY 1),

username VARCHAR(20) NOT NULL,

street VARCHAR(100) NOT NULL,

province VARCHAR(20) NOT NULL,

country VARCHAR(20) NOT NULL,

zip VARCHAR(20) NOT NULL,

phone VARCHAR(20),

PRIMARY KEY (ship\_id)

);

CREATE TABLE po (

po\_id int NOT NULL GENERATED ALWAYS AS IDENTITY (START WITH 1, INCREMENT BY 1),

ship\_id int NOT NULL,

dateOfPurchase VARCHAR(20) NOT NULL,

lname VARCHAR(20) NOT NULL,

fname VARCHAR(20) NOT NULL,

status VARCHAR(20) NOT NULL,

PRIMARY KEY (po\_id)

);

CREATE TABLE poitem (

poi\_id int NOT NULL GENERATED ALWAYS AS IDENTITY (START WITH 1, INCREMENT BY 1),

po\_id int NOT NULL,

book\_id VARCHAR(20) NOT NULL,

quanity int NOT NULL,

PRIMARY KEY(po\_id,book\_id),

unique (po\_id),

FOREIGN KEY(po\_id) REFERENCES PO(po\_id) ON DELETE CASCADE,

unique (book\_id),

FOREIGN KEY(book\_id) REFERENCES Books(bid) ON DELETE CASCADE

);

create table cart (username VARCHAR(20), bid VARCHAR(20) NOT NULL, title VARCHAR(60) NOT NULL, author VARCHAR(40) NOT NULL, yearPublished INT NOT NULL, price INT NOT NULL, isbn VARCHAR(10) NOT NULL, pageNumber INT NOT NULL, category VARCHAR(20) NOT NULL, publisher VARCHAR(40) NOT NULL, image VARCHAR(100) NOT NULL, booktype varchar(15), quantity int default 1, PRIMARY KEY(username, bid), foreign key (username) references users, foreign key (bid) references books);

insert into users (username, password, usertype) values ('NotWalterWhite', 'heisenberg', 'CUSTOMER') ('MyUsername', 'password' ,'CUSTOMER'), ('steve', 'world', 'CUSTOMER'),

('admin','admin','ADMIN'), ('partner','partner','PARTNER')

insert into categories (category) values (‘Computer Science’, ‘Engineering’, ‘Fiction’, ‘History’, ‘Political Science’, ‘Science’);

**insert** **into** books (bid,title,author,yearpublished,price,isbn,pagenumber,category,publisher,image,booktype) **values**

('f001','A Game of Thrones: A Song of Ice and Fire','George R.R. Martin',1997,10,'0553573404',864,'Fiction','Bantam','gameofthrones.jpg','Paperback'),

('f002','A Clash of Kings: A Song of Ice and Fire','George R.R. Martin',2000,10,'0553579908',1040,'Fiction','Bantam','clashofkings.jpg','Paperback'),

('f003','A Storm of Swords: A Song of Ice and Fire','George R.R. Martin',2003,10,'055357342X',1216,'Fiction','Bantam','stormofswords.jpg','Paperback'),

('f004','A Feast of Crows: A Song of Ice and Fire','George R.R. Martin',2006,10,'055357342X',1104,'Fiction','Bantam','feastofcrows.jpg','Paperback'),

('f005','A Dance with Dragons: A Song of Ice and Fire','George R.R. Martin',2013,10,'0553582011',1152,'Fiction','Bantam','dancewithdragons.jpg','Paperback'),

('h001','The Art of War','Sun Tzu',2002,5,'0486425576',96,'History','Dover','artofwar.jpg','Paperback'),

('h002','The Republic','Plato',2000,5,'0486411217',288,'History','Dover','republic.jpg','Paperback'),

('s001','The Origin of Species','Charles Darwin',2003,6,'0451529065',576,'Science','Signet','originsofevolution.jpg','Paperback'),

('p001','The Communist Manifesto','Karl Marx & Friedrich Engels',2008,7,'019953571X',96,'Political Science','Oxford','communistmanifesto.jpg','Paperback'),

('p002','Leviathan','Thomas Hobbes',2008,7,'0199537283',576,'Political Science','Oxford','leviathan.jpg','Paperback'),

('s002','Death By Black Hole: And Other Cosmic Quandries','Neil deGrasse Tyson',2014,15,'039335038X',384,'Science','WW Norton','blackhole.jpg','Paperback'),

('f006','1984','George Orwell',2008,8,'0141036141',336,'Fiction','Penguin UK','1984.jpg','Paperback'),

('e001','Reeds Mathematical Tables and Engineering Formulae','David Reid',2007,28,'0713683430',160,'Engineering','Thomas Reed','reeds.jpg','Paperback'),

('cs001','Java By Abstraction: A Client-View Approach','Hamzeh Roumani',2010,184,'0558819834',506,'Computer Science','Pearson Learning Solutions','javabyabstraction.jpg','Paperback');

insert into reviews (username, bid, rating, comments) values ('MyUsername','f006',5,'So great!'),

('MyUsername','f003',5,'An instant classic!'), (‘steve’, ‘p001’, 2, ‘I slept halfway through this book’), (‘steve’, ‘cs001’, 1, ‘I also slept halfway through this book’), (‘NotWalterWhite’, ‘p002’, 5, ‘Great to read! Love it.’)