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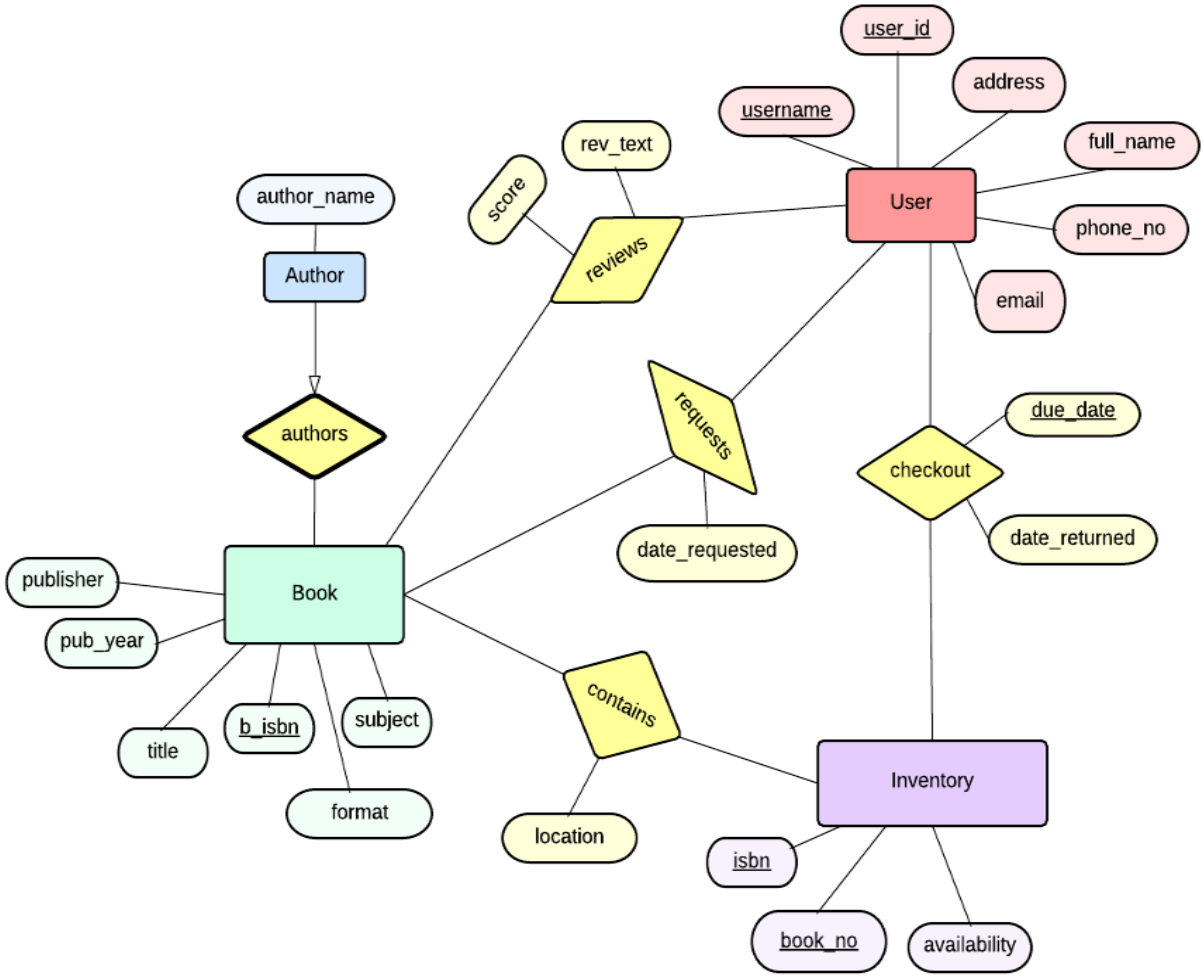
CS 5530 – Project: Phase 1

ER Diagram



SQL Queries

```
create table Book( b_isbn char(20),
                   title varchar(50),
                   subject char(20),
                   publisher char(30),
                   pub_year year,
                   format char(20),
                   primary key (b_isbn))

create table Inventory( isbn char(20),
                        book_no int,
```

```
                availability char(20) not null,
                primary key (isbn, book_no))

create table User( username varchar(30),
                user_id int auto_increment,
                address varchar(40) not null,
                full_name char(30) not null,
                phone_no varchar(11),
                email varchar(30),
                primary key (username, user_id))

create table Author( isbn char(20),
                author_name char(30),
                primary key (isbn),
                foreign key (isbn) references Book(b_isbn),
                on delete cascade)

create table Reviews( isbn char(20),
                username varchar(30),
                user_id int,
                score int not null,
                rev_text varchar(100),
                primary key (isbn, username, user_id),
                foreign key (isbn) references Book(b_isbn),
                foreign key (username, user_id) references User,
                check (rating >= 1 and rating <= 10))

create table Requests( isbn char(20),
                username varchar(30),
                user_id int,
                date_requested datetime,
                primary key (isbn, username, user_id, date_requested),
                foreign key (isbn) references Book(b_isbn),
                foreign key (username, user_id) references User)

create table Checkout (isbn char(20),
                book_no int,
                username varchar(30),
                user_id int not null,
                due_date date,
                date_returned date,
                primary key (isbn, username, user_id, due_date),
                foreign key (isbn) references Inventory,
                foreign key (username, user_id) references User)

create table Contains ( isbn char(20),
                book_no int,
                b_isbn char(20),
                location char(30),
```

```
primary key (isbn, book_no),
foreign key (isbn, book_no) references Inventory,
foreign key (b_isbn) references Book,
constraint sameBook check ( select i.isbn, i.book_no, c.location
                            from Inventory i, Contains c, Book B
                            where i.isbn = b.b_isbn))
```