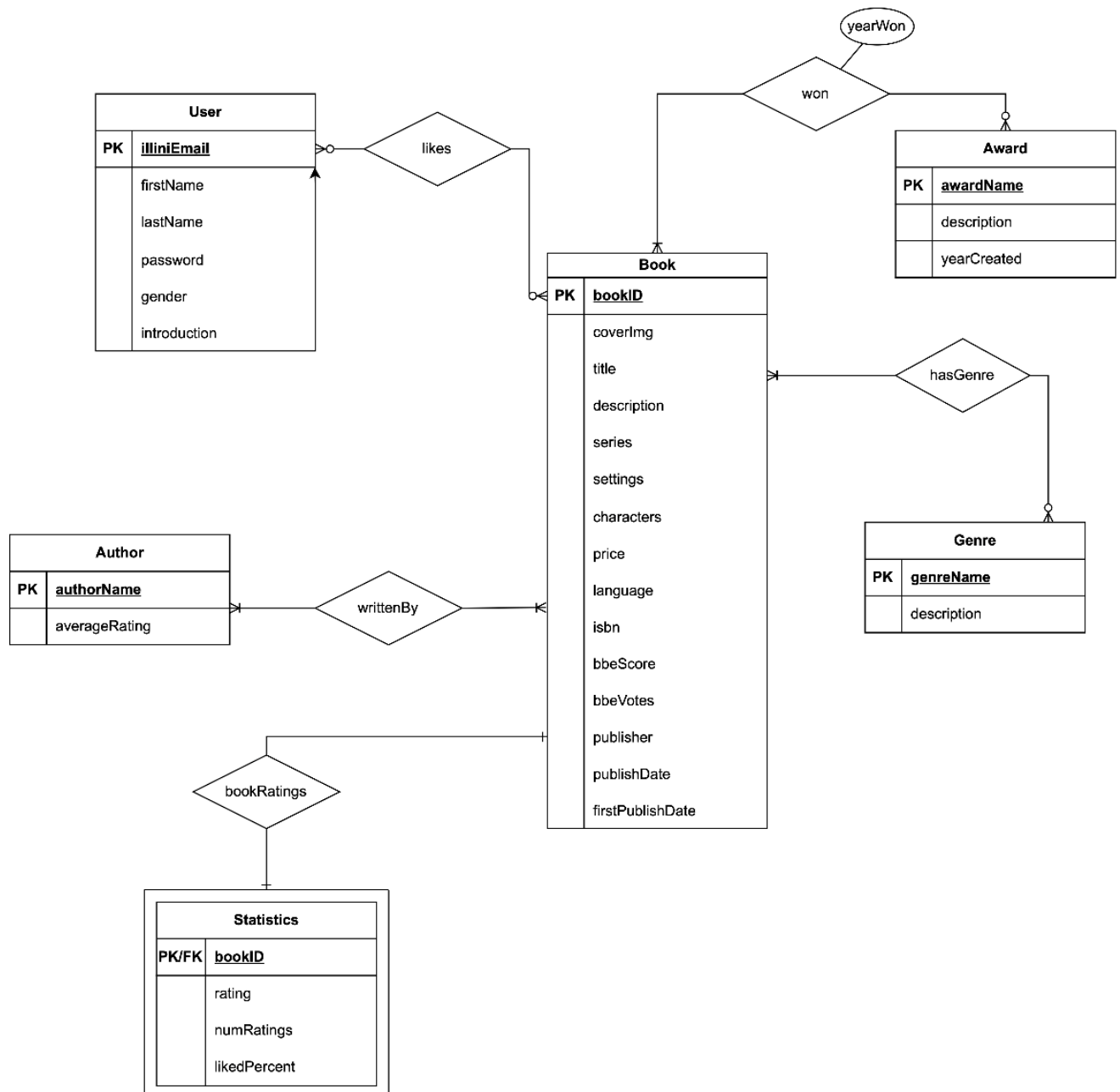


# Illini BookBridge Conceptual and Logical Database Design

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## ER-Diagram





## Relational Schema

```
CREATE TABLE User(  
    illiniEmail VARCHAR(255) PRIMARY KEY,  
    firstName VARCHAR(50),  
    lastName VARCHAR(50),  
    password VARCHAR(20),  
    gender VARCHAR(20),  
    Introduction VARCHAR(255)  
);  
  
CREATE TABLE Book(  
    bookID VARCHAR(255) PRIMARY KEY,  
    coverImg VARCHAR(255),  
    title VARCHAR(255),  
    description TEXT,  
    series VARCHAR(255),  
    settings TEXT,  
    characters TEXT,  
    price REAL,  
    language VARCHAR(30),  
    isbn VARCHAR(13),  
    bbeScore REAL,  
    bbeVotes REAL,  
    publisher VARCHAR(255),  
    publishDate DATE,  
    firstPublicationDate DATE  
);  
  
CREATE TABLE Author(  
    authorName VARCHAR(50) PRIMARY KEY,  
    averageRating REAL  
);  
  
CREATE TABLE Award(  
    awardName VARCHAR(255) PRIMARY KEY,  
    description TEXT,  
    yearCreated INT  
);  
  
CREATE TABLE Genre(  
    genreName VARCHAR(30) PRIMARY KEY,  
    description TEXT  
);  
  
CREATE TABLE Statistics(  
    bookID VARCHAR(255) [FK to Book.bookID],  
    rating REAL  
    numRatings INT  
    likedPercent REAL  
);  
  
CREATE TABLE likes(  
    bookID VARCHAR(255) [FK to Book.bookID],
```

```

        email VARCHAR(255) [FK to User.illiniEmail]
    );
CREATE TABLE won(
    bookID VARCHAR(255) [FK to Book.bookID],
    awardName VARCHAR(255) [FK to Award.awardName],
    yearWon INT
);
CREATE TABLE hasGenre(
    bookID VARCHAR(255) [FK to Book.bookID],
    genreName VARCHAR(255) [FK to Genre.genreName]
);
CREATE TABLE writtenBy(
    bookID VARCHAR(255) [FK to Book.bookID],
    authorName VARCHAR(24) [FK to Author.authorName]
);

```

### Assumption Descriptions

- **User** contains information of each user. Each user *likes* zero or more **books**. **Book** contains information about each book. Each book can be *liked* by zero or more **users**. User-Book has a many-many relationship *Likes*.
- **Award** is a relation storing all awards mentioned in the book database. Books can *win* zero or more **awards**. The year an award was won as is stored in the won relationship. Each **award** is *won* by one or more books. If an award is won by zero books then it will not be in our database. Book-Award has a many-many relationship *Won*.
- **Genre** is a relation containing all the genres a book can have. Each **book** can have zero or more genres. Each **genre** is had by one or more books. If a genre has zero books then it will not be in our database. Genre-Book has a many-to-many relationship *hasGenre*.
- **Statistics** has the rating statistics of each book. Each statistic is for one **book**. Each book has one **statistic**. Statistics-Book has a one-to-one relationship *BookRatings*.
- **Author** has all the names and ratings of an author. Each book can be *written by* one or more **authors**. Each author *wrote* one or more **books**. Author-Book has a many-many relationship *written by*.