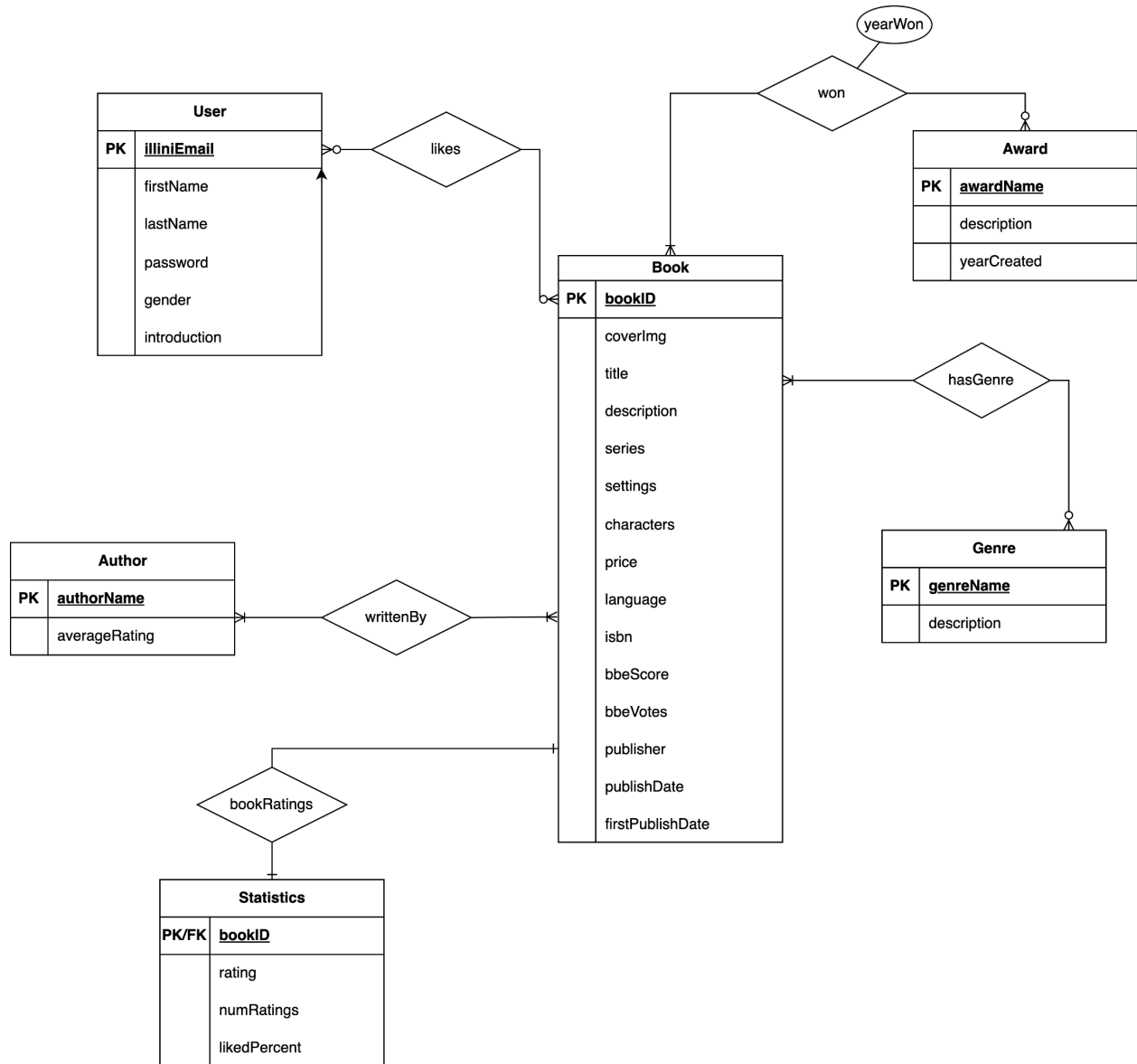# Illini BookBridge Conceptual and Logical Database Design
By Jaywoo Jo, Ruhana Azam, John Shen, Alan Zhang

ER-Diagram:

Relational Schema:

User(
       illiniEmail: VARCHAR(255) [PK],
       firstName: VARCHAR(50),
       lastName: VARCHAR(50),
       password: VARCHAR(20),
       gender: VARCHAR(20),
       Introduction: VARCHAR(255)
)
Book(
       bookID: VARCHAR(255) [PK],
       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
)
Author(
       authorName: VARCHAR(50) [PK],
       averageRating: REAL
)
Award(
       awardName: VARCHAR(255) [PK],
       description: TEXT,
       yearCreated: INT
)
Genre(
       genreName: VARCHAR(30) [PK],
       description: TEXT
)
Statistics(
       bookID: VARCHAR(255) [PK] [FK to Book.bookID],
       rating: REAL
       numRatings: INT
       likedPercent: REAL
)

likes(
        bookID: VARCHAR(255) [PK] [FK to Book.bookID],
        email: VARCHAR(255) [PK] [FK to User.illiniEmail]
)
won(
        bookID: VARCHAR(255) [PK] [FK to Book.bookID],
        awardName: VARCHAR(255) [PK] [FK to Award.awardName],
        yearWon: INT
)
hasGenre(
        bookID: VARCHAR(255) [PK] [FK to Book.bookID],
        genreName: VARCHAR(255) [PK] [FK to Genre.genreName]
)
writtenBy(
        bookID: VARCHAR(255) [PK] [FK to Book.bookID],
        authorName: VARCHAR(24) [PK] [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*.