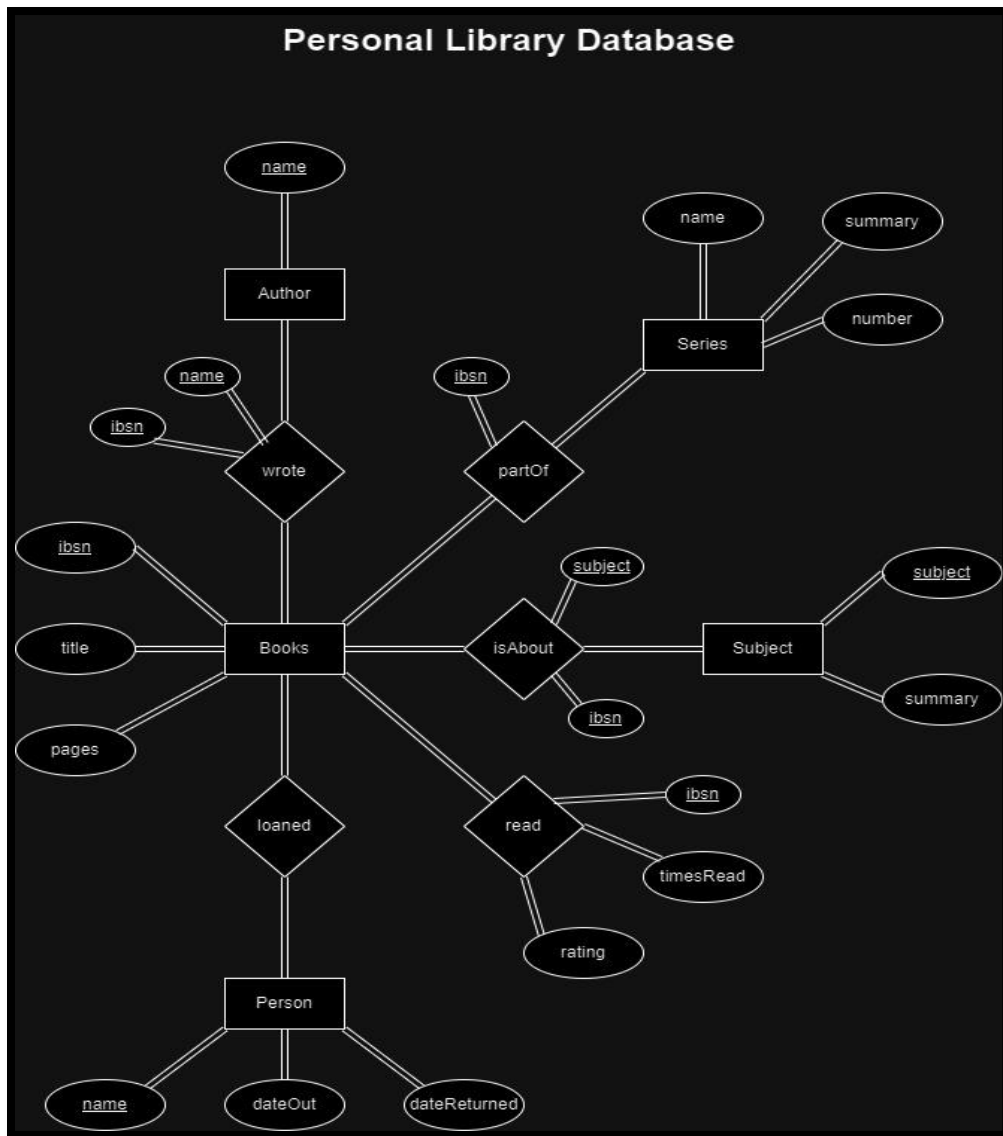


### Assignment 3: Step 2 of My PDA



#### A) Personal Library Schema:

Books (isbn, title, pages)

Author (name)

Series (name, summary, placement, outOf)

Subject (subject, summary)

Person (name, dateOut, dateReturned)

Wrote (isbn, name)

partOf (isbn, name)

isAbout (isbn, subject)

Read (isbn, timesRead, rating)

Loaned (isbn, name)

Part B:

# Create a new database, but drop it if it already exists

drop database if exists homeLibrary;

create database homeLibrary;

show databases;

# Start using the new database

use homeLibrary;

# See which database we are using

select 'running statement "select database":' as ' ';

select database();

# Create new tables(relations) for database, but drop them first if they already exist.

select 'running 10 checks for existing tables/relations:' as ' ';

drop table if exists Books;

drop table if exists Author;

drop table if exists Series;

drop table if exists Subject;

drop table if exists Person;

drop table if exists Wrote;

drop table if exists partOf;

drop table if exists isAbout;

drop table if exists timesRead;

drop table if exists Loaned;

select 'creating 10 tables/relations:' as ' ';

```
create table Books(  
    isbn varchar(20),  
    title varchar(30) NOT NULL,  
    pages int,  
    Primary Key(isbn)  
);
```

```
create table Author(  
    name varchar(20),  
    Primary Key(name)  
);
```

```
create table Series(  
    name varchar(20),  
    summary varchar(140) NOT NULL,  
    placement int,  
    outOf int,  
    Primary Key(name)  
);
```

```
create table Subject(
```

```
subject varchar(20),  
summary varchar(140) NOT NULL,  
Primary Key(subject)  
);
```

```
create table Person(  
name varchar(20),  
dateOut DATE,  
dateReturned DATE,  
Primary Key(name)  
);
```

```
create table Wrote(  
isbn varchar(20),  
name varchar(20),  
Primary Key(isbn, name)  
);
```

```
create table partOf(  
isbn varchar(20),  
name varchar(20),  
Primary Key(isbn, name)  
);
```

```
create table isAbout(  
isbn varchar(20),  
subject varchar(20),
```

```
    Primary Key(isbn, subject)
);
```

```
create table timesRead(
    isbn varchar(20),
    timesRead int,
    rating int,
    Primary Key(isbn)
);
```

```
create table Loaned(
    isbn varchar(20),
    name varchar(20),
    Primary Key(isbn, name)
);
```

```
# Check descriptions for all tables
```

```
select 'running "describe Foo" for 10 tables/relations' as ' ';
describe Books;
describe Author;
describe Series;
describe Subject;
describe Person;
describe Wrote;
describe partOf;
describe isAbout;
describe timesRead;
```

```
describe Loaned;
```

```
# Execute three insert commands into one of the relations
```

```
select 'running 3 inserts on Books table:' as ' ';
```

```
insert into Books values("978-0-345-54505-3", "Dawn of the Jedi", 317);
```

```
insert into Books values("978-0-345-51135-5", "Revan", 343);
```

```
insert into Books values("978-0-345-80678-9", "The Shining", 659);
```

```
select * from Books;
```

Part C:

```
mysql> source C:\Users\farrj\Documents\Scripts\COMP3421\Week03\a03createtables.sql
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
Query OK, 9 rows affected (0.02 sec)
```

```
Query OK, 1 row affected (0.00 sec)
```

```
+-----+
```

```
| Database      |
```

```
+-----+
```

```
| homelibrary   |
```

```
| information_schema |
```

```
| mysql         |
```

```
| performance_schema |
```

```
| sys           |
```

```
| test          |
```

|       |  |
|-------|--|
| test3 |  |
|-------|--|

|       |  |
|-------|--|
| test4 |  |
|-------|--|

|         |
|---------|
| +-----+ |
|---------|

8 rows in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Database changed

Query OK, 0 rows affected (0.00 sec)

|         |
|---------|
| +-----+ |
|---------|

|  |  |
|--|--|
|  |  |
|--|--|

|         |
|---------|
| +-----+ |
|---------|

|                                      |  |
|--------------------------------------|--|
| running statement "select database": |  |
|--------------------------------------|--|

|         |
|---------|
| +-----+ |
|---------|

1 row in set, 1 warning (0.00 sec)

|         |
|---------|
| +-----+ |
|---------|

|            |  |
|------------|--|
| database() |  |
|------------|--|

|         |
|---------|
| +-----+ |
|---------|

|             |  |
|-------------|--|
| homelibrary |  |
|-------------|--|

|         |
|---------|
| +-----+ |
|---------|

1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

|         |
|---------|
| +-----+ |
|---------|

```
|
|
+-----+
| running 10 checks for existing tables/relations: |
+-----+
1 row in set, 1 warning (0.00 sec)
```

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

```
+-----+
|
|
```



+-----+

| creating 10 tables/relations: |

+-----+

1 row in set, 1 warning (0.00 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.00 sec)

+-----+

```

|
|
+-----+
| running "describe Foo" for 10 tables/relations |
+-----+
1 row in set, 1 warning (0.00 sec)

```

```

+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| isbn  | varchar(20) | NO   | PRI | NULL    |      |
| title | varchar(30) | NO   |     | NULL    |      |
| pages | int         | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

```

+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(20) | NO   | PRI | NULL    |      |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

```

+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| name  | varchar(20) | NO   | PRI | NULL    |      |
| summary | varchar(140) | NO   |     | NULL    |      |

```

|           |     |     |  |      |  |  |
|-----------|-----|-----|--|------|--|--|
| placement | int | YES |  | NULL |  |  |
| outOf     | int | YES |  | NULL |  |  |

+-----+-----+-----+-----+-----+

4 rows in set (0.00 sec)

|       |      |      |     |         |       |  |
|-------|------|------|-----|---------|-------|--|
| Field | Type | Null | Key | Default | Extra |  |
|-------|------|------|-----|---------|-------|--|

+-----+-----+-----+-----+-----+

|         |              |    |     |      |  |  |
|---------|--------------|----|-----|------|--|--|
| subject | varchar(20)  | NO | PRI | NULL |  |  |
| summary | varchar(140) | NO |     | NULL |  |  |

+-----+-----+-----+-----+-----+

2 rows in set (0.00 sec)

|       |      |      |     |         |       |  |
|-------|------|------|-----|---------|-------|--|
| Field | Type | Null | Key | Default | Extra |  |
|-------|------|------|-----|---------|-------|--|

+-----+-----+-----+-----+-----+

|              |             |     |     |      |  |  |
|--------------|-------------|-----|-----|------|--|--|
| name         | varchar(20) | NO  | PRI | NULL |  |  |
| dateOut      | date        | YES |     | NULL |  |  |
| dateReturned | date        | YES |     | NULL |  |  |

+-----+-----+-----+-----+-----+

3 rows in set (0.00 sec)

|       |      |      |     |         |       |  |
|-------|------|------|-----|---------|-------|--|
| Field | Type | Null | Key | Default | Extra |  |
|-------|------|------|-----|---------|-------|--|

+-----+-----+-----+-----+-----+

|      |             |    |     |      |  |  |
|------|-------------|----|-----|------|--|--|
| isbn | varchar(20) | NO | PRI | NULL |  |  |
| name | varchar(20) | NO | PRI | NULL |  |  |

+-----+-----+-----+-----+-----+

2 rows in set (0.00 sec)

+-----+-----+-----+-----+-----+

| Field | Type | Null | Key | Default | Extra |

+-----+-----+-----+-----+-----+

| isbn | varchar(20) | NO | PRI | NULL | |

| name | varchar(20) | NO | PRI | NULL | |

+-----+-----+-----+-----+-----+

2 rows in set (0.00 sec)

+-----+-----+-----+-----+-----+

| Field | Type | Null | Key | Default | Extra |

+-----+-----+-----+-----+-----+

| isbn | varchar(20) | NO | PRI | NULL | |

| subject | varchar(20) | NO | PRI | NULL | |

+-----+-----+-----+-----+-----+

2 rows in set (0.00 sec)

+-----+-----+-----+-----+-----+

| Field | Type | Null | Key | Default | Extra |

+-----+-----+-----+-----+-----+

| isbn | varchar(20) | NO | PRI | NULL | |

| timesRead | int | YES | | NULL | |

| rating | int | YES | | NULL | |

+-----+-----+-----+-----+-----+

3 rows in set (0.00 sec)

| Field | Type        | Null | Key | Default | Extra |
|-------|-------------|------|-----|---------|-------|
| isbn  | varchar(20) | NO   | PRI | NULL    |       |
| name  | varchar(20) | NO   | PRI | NULL    |       |

2 rows in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

|                                   |
|-----------------------------------|
|                                   |
|                                   |
| running 3 inserts on Books table: |

1 row in set, 1 warning (0.00 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

| isbn | title | pages |
|------|-------|-------|
|      |       |       |

|                   |                  |     |
|-------------------|------------------|-----|
| 978-0-345-51135-5 | Revan            | 343 |
| 978-0-345-54505-3 | Dawn of the Jedi | 317 |
| 978-0-345-80678-9 | The Shining      | 659 |

+-----+-----+-----+

3 rows in set (0.00 sec)