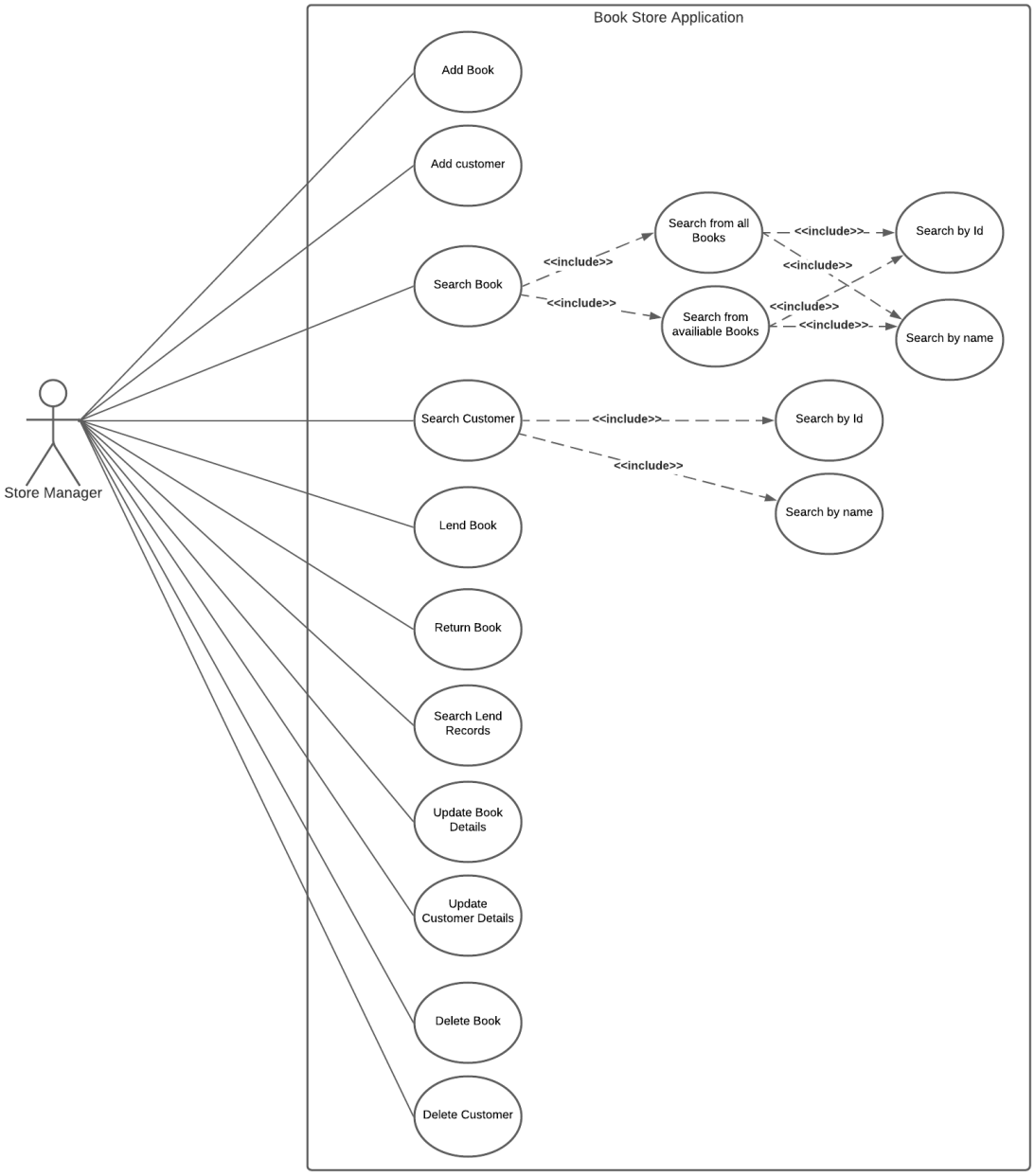
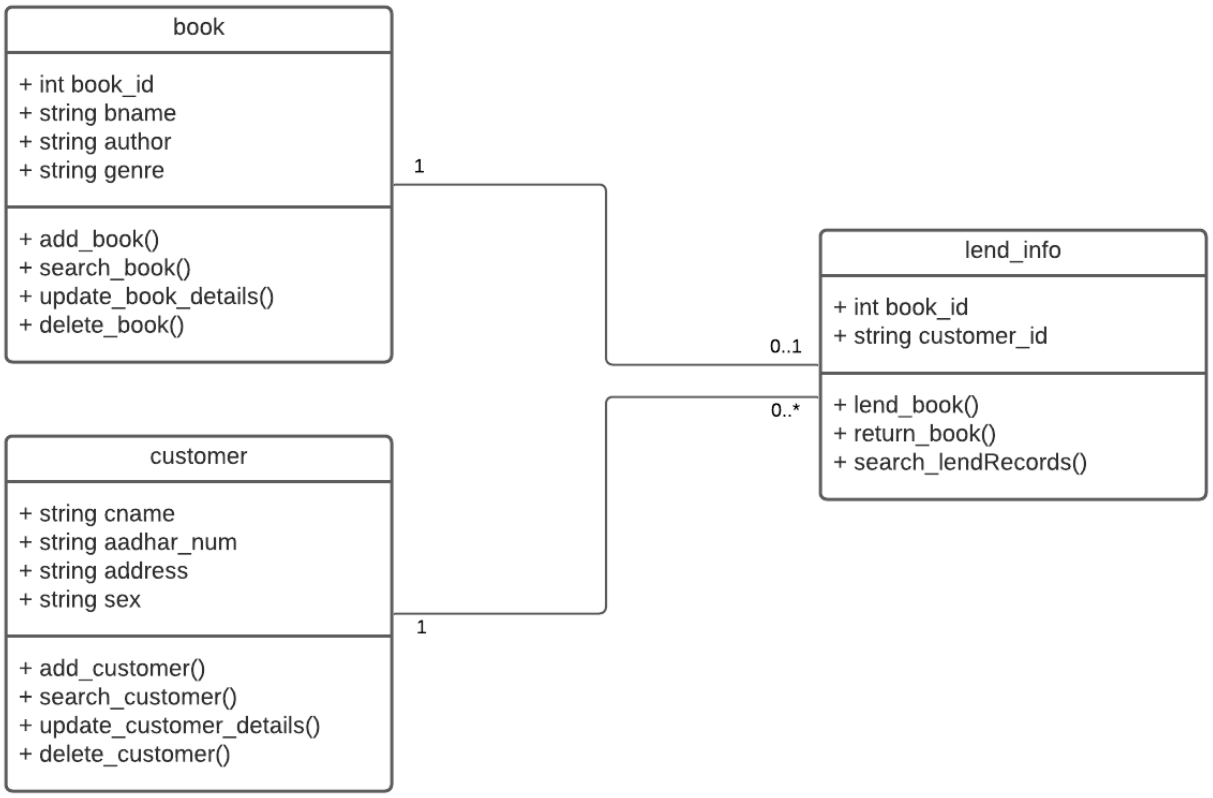
Project Report for Book Store Management Application

-IMT2019048

1. Use Case diagram



2. UML diagram



3. OR Mapping

book :-

Name of column	Data Type	Constraints
book_id	Number	PK
bname	String	NOT NULL
author	String	
genre	String	

customer :-

Name of column	Data Type	Constraints
cname	Number	NOT NULL
aadhar_um	String	PK
address	String	
sex	Character	

lend_info :-

Name of column	Data Type	Constraints
book_id	Number	PK, FK references book.book_id
customer_id	String	FK references customer.aadhar_num, NOT NULL

4. Output Screenshots

- Tables with some sample data

```
mysql> select * from book;
+---------+--------+----------+---------+
| book_id | bname  | author   | genre   |
+---------+--------+----------+---------+
|       1 | Book1  | Author3  | Genre1  |
|       4 | Book2  | Author2  | Genre2  |
|       5 | Book5  | Author5  | Genre5  |
|       6 | Book38 | Author35 | Genre15 |
|       7 | Book76 | Author50 | Genre12 |
+---------+--------+----------+---------+
5 rows in set (0.00 sec)
```

```
mysql> select * from customer;
+--------+--------------+-----------+------+
| cname  | aadhar_num   | address   | sex  |
+--------+--------------+-----------+------+
| Cust01 | 123456789012 | Address01 | M    |
| Cust2  | 234567890123 | Address2  | F    |
| Cust45 | 678901234567 | Address45 | M    |
+--------+--------------+-----------+------+
3 rows in set (0.00 sec)
```

```
mysql> select * from lend_info;
+---------+--------------+
| book_id | customer_id  |
+---------+--------------+
|       1 | 123456789012 |
|       7 | 123456789012 |
+---------+--------------+
2 rows in set (0.00 sec)
```

- Menu

```
Connecting to database...
1. Add book
2. Add customer
3. Search all books
4. Search available books
5. Search customer
6. Lend book
7. Return book
8. Search Lend Records
9. Update book details
10. Update Customer details
11. Delete Book
12. Delete Customer
0. Quit
```

- Add, read, update, delete for book

  - Add

```
1
Give the book name :
BookTest
Give the book author :
Author_test
Give the book genre :
Genre_test
```

```
Id: 1, Name: Book1, Author: Author3, Genre: Genre1
Id: 4, Name: Book2, Author: Author2, Genre: Genre2
Id: 5, Name: Book5, Author: Author5, Genre: Genre5
Id: 6, Name: Book38, Author: Author35, Genre: Genre15
Id: 7, Name: Book76, Author: Author50, Genre: Genre12
Id: 10, Name: BookTest, Author: Author_test, Genre: Genre_test
```

  - Update

```
9
Id for the book to be updated :
10
Old Name : BookTest
Do you want to change name? y/n
y
Give the new book name :
Book_test
Old Author : Author_test
Do you want to change author? y/n
n
Old Genre : Genre_test
Do you want to change genre? y/n
n
```

```
3
1. Search By name
2. Search By id
1
Give the book name : (Leave empty to display all books)

Id: 1, Name: Book1, Author: Author3, Genre: Genre1
Id: 4, Name: Book2, Author: Author2, Genre: Genre2
Id: 5, Name: Book5, Author: Author5, Genre: Genre5
Id: 6, Name: Book38, Author: Author35, Genre: Genre15
Id: 7, Name: Book76, Author: Author50, Genre: Genre12
Id: 10, Name: Book_test, Author: Author_test, Genre: Genre_test
```

- Delete

```
11
Id for the book to be deleted :
10
```

```
3
1. Search By name
2. Search By id
1
Give the book name : (Leave empty to display all books)

Id: 1, Name: Book1, Author: Author3, Genre: Genre1
Id: 4, Name: Book2, Author: Author2, Genre: Genre2
Id: 5, Name: Book5, Author: Author5, Genre: Genre5
Id: 6, Name: Book38, Author: Author35, Genre: Genre15
Id: 7, Name: Book76, Author: Author50, Genre: Genre12
```

- Add, read, update, delete for customer

- Add

```
2
Give the customer name :
CustTest
Give the customer aadhar number :
111122223333
Give the customer address:
AddressTest
Give the customer sex: (M for male, F for female)
M
```

```
5
1. Search By name
2. Search By aadhar id
1
Give the customer name : (Leave empty to display all customers)

Name: CustTest, Aadhar: 111122223333, Address: AddressTest, Sex: M
Name: Cust01, Aadhar: 123456789012, Address: Address01, Sex: M
Name: Cust2, Aadhar: 234567890123, Address: Address2, Sex: F
Name: Cust45, Aadhar: 678901234567, Address: Address45, Sex: M
```

- Update

```
10
Aadhar for the customer to be updated :
111122223333
Old Name : CustTest
Do you want to change name? y/n
y
Give the new Customer name :
Cust_test
Old Address : AddressTest
Do you want to change address? y/n
y
Give the new customer address :
Address_test
Old gender : M
Do you want to change gender of the customer? y/n
n
```

```
5
1. Search By name
2. Search By aadhar id
1
Give the customer name : (Leave empty to display all customers)

Name: Cust_test, Aadhar: 111122223333, Address: Address_test, Sex: M
Name: Cust01, Aadhar: 123456789012, Address: Address01, Sex: M
Name: Cust2, Aadhar: 234567890123, Address: Address2, Sex: F
Name: Cust45, Aadhar: 678901234567, Address: Address45, Sex: M
```

- Delete

```
12
Aadhar for the customer to be deleted :
111122223333
```

```
5
1. Search By name
2. Search By aadhar id
1
Give the customer name : (Leave empty to display all customers)

Name: Cust01, Aadhar: 123456789012, Address: Address01, Sex: M
Name: Cust2, Aadhar: 234567890123, Address: Address2, Sex: F
Name: Cust45, Aadhar: 678901234567, Address: Address45, Sex: M
```

- Lending a book and returning a book

    - Lending a book

```
6
Give the customer aadhar number :
234567890123
Give the book id:
4
```

```
8
Give the book id : (Leave empty to display all records)

Book Id: 1, Customer Id: 123456789012, Book Name: Book1, Customer Name: Cust01
Book Id: 7, Customer Id: 123456789012, Book Name: Book76, Customer Name: Cust01
Book Id: 4, Customer Id: 234567890123, Book Name: Book2, Customer Name: Cust2
```

    - Returning a book

```
7
Id for the book to be returned :
4
Aadhar of the returnee :
234567890123
```

```
8
Give the book id : (Leave empty to display all records)

Book Id: 1, Customer Id: 123456789012, Book Name: Book1, Customer Name: Cust01
Book Id: 7, Customer Id: 123456789012, Book Name: Book76, Customer Name: Cust01
```

5. Notes and Instructions to run the code

1. Start the mysql server.
2. Execute the bookStore_create.sql script using the command : source bookStore_create.sql, in mysql command line.
3. Run the java program using the command : java -cp mysql-connector-java-8.0.18.jar MainProj.java .