1. Create Schema Library

```
mysql> create database library;
```

```
F
                                 dharma@Ubutu: ~
                                                          Q = -
                                                                        mysql> show databases
    -> ;
 Database
 as1
 assignment1_sql
 information_schema
 library
 mysql
 performance_schema
 sys
7 rows in set (0.01 sec)
mysql> use library
Database changed
mysql> show tables;
Empty set (0.00 sec)
```

2. Create tables

Books: BookID - Pk,BookName,AuthorName,Genre,pages

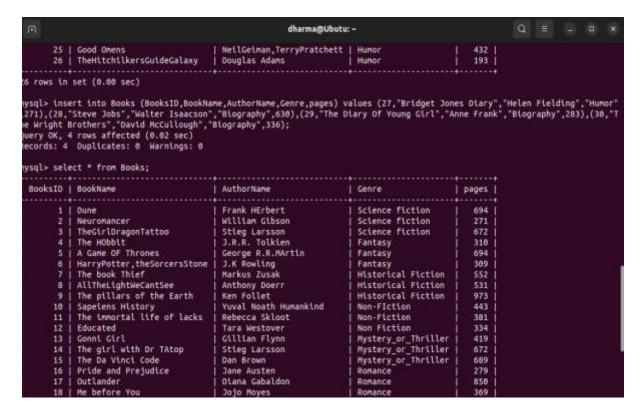
```
mysql> create table Books(BooksID int primary key,BookName varchar(30),AuthorName varchar(30),Genre varcha
r(30),pages int);
Query OK, 0 rows affected (0.07 sec)
mysql> Select * from Books;
Empty set (0.00 sec)
mysql> describe Books;
| Field
               Type
                              | Null | Key | Default | Extra |
                               NO PRI NULL
 BooksID
  BookName | varchar(30) | YES
AuthorName | varchar(30) | YES
                                                NULL
                                                NULL
  Genre
                 varchar(30) | YES
                                                NULL
  pages
                 int
                                 YES
                                                NULL
  rows in set (0.00 sec)
```

Customers : CustomerId - PK, CustomerName, address

BooksBorrowed:SINo,BookID - FK,CustomerID - FK,DaysBookRetained

Cost: MaxPages, Cost/day

3.Google Search for books along with authors, genre and pages. Insert atleast 5 authors and 5 different genres into Books Table. Make sure you have atleast 30 records.



4. Insert 15 customers into customer table by providing appropriate details

```
7 rows in set (0.00 sec)
mysqls USe library;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
Database changed
mysqls show tables;
| Tables_in_library |
| Books
| BooksBorrowed |
| cost |
| customers |
| 4 rows in set (0.00 sec)
mysqls describe customers;
| Field | Type | Null | Key | Default | Extra |
| CustomerID | int | NO | PRI | NULL |
| CustomerName | varchar(30) | VES | NULL |
| adress | varchar(30) | VES | NULL |
| adress | varchar(30) | VES | NULL |
| adress | varchar(30) | VES | NULL |
| 3 rows in set (0.00 sec)
mysqls insert into customers(CustomerID_CustomerName_adress) values(1, "Teja", "Adoni"), (2, "Shreeja", "Adoni2"), (3, "Sai", "Venka aquirt"), (4, "Fahad", "Kodur"), (5, "Nithin", "Mellore"), (6, "Kyathi", "Mellore?"), (7, "Balaji", "HPl"), (8, "Shargavi", "Kadappa"), (9, "Gayathit", "BVCHT"), (10, "Pooji", "ATP"), (11, "Prlya", "Vijag"), (12, "Syan", "Araku"), (13, "Harini", "Hyderabad"), (14, "Gopal", "Nepal"), (15, "Deva", "GNBV"), (15
```

```
mysql> insert into customers(CustomerID,CustomerName,adress) values(1,"Teja","Adoni"),(2,"Shreeja","Adoni2"),(3,"Sai","Venka
tagiri"),(4,"Fahad","Kodur"),(5,"Nithin","Nellore"),(6,"Kyathi" ,"Nellore2"),(7,"Balaji","MPl"),(8,"Bhargavi","Kadappa"),(9,
"Gayathri","RYCHT"),(10,"Pooji","ATP"),(11,"Priya","Vijag"),(12,"Syan","Araku"),(13,"Harini","Hyderabad"),(14,"Gopal","Nepal
"),(15,"Deva","GNBV");
Query OK, 15 rows affected (0.81 sec)
Records: 15 Duplicates: 8 Marnings: 8
mysql> select * form customers;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for
the right syntax to use near 'form customers' at line 1
  ysql> select * from customers;
  CustomerID | CustomerName | adress
                     1 | Teja
                           Shreeja
                                                      1 Adont2
                    3 | Sat
4 | Fahad
                                                     | Venkatagiri
                                                     Kodur
                     S | Nithin
                    6 | Kyathi
7 | Balaji
                                                      | Nellore2
                                                      MPL
                     8 | Bhargavt
                                                      Kadappa
                   9 | Gayathri
10 | Pooji
11 | Priya
12 | Syam
13 | Harini
                                                         RYCHT
                                                         ATP
                                                     | Vijag
| Araku
                                                         Hyderabad
                   14 | Gopal
                                                       | Nepal
                   15 | Deva
                                                      I CNBV
15 rows in set (0.00 sec)
mysql>
```

5. Using BookId in Books Table and CustomerID in Customer Table insert data into BooksBorrowed table to have atleast 15 records.

6. Retrieve the total number of books in each genre.

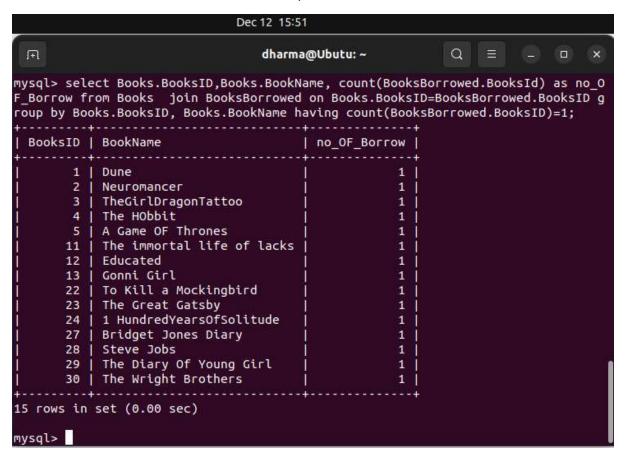
```
mysql> select Genre, count(*) as No_of_Books from Books group by Genre;
Genre
                      | No_of_Books
| Science fiction
                                  3
| Fantasy
                                  3
| Historical Fiction
                                  3
| Non-Fiction
                                  2
| Non Fiction
| Mystery_or_Thriller
                                  3
Romance
                                  3
Dystopain
                                  3
| Classic
                                  3
Humor
                                  3
Biography
                                  3
11 rows in set (0.00 sec)
mysql>
```

7. Retrieve total number of books borrowed.

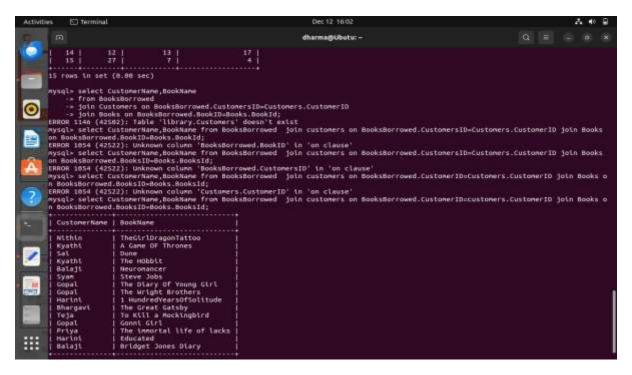
```
mysql> select count(*) as TotalBooksBorrowed from BooksBorrowed;

| TotalBooksBorrowed |
| 15 |
| 1 row in set (0.01 sec)
| mysql> |
```

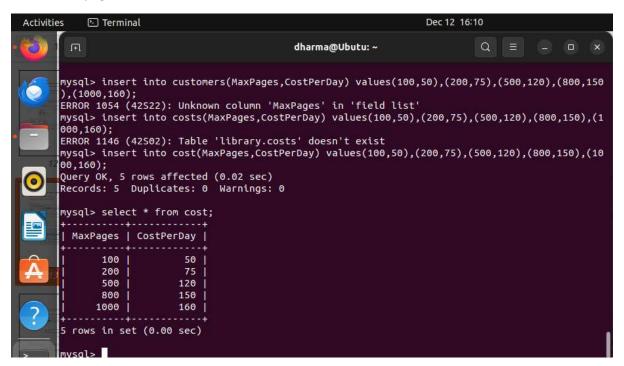
8. retrieve names of books borrowed without repetition



9. Retrieve the customerName, BookName for books borrowed.



10. Insert below data into Cost table 100pages -50 rs, 200pages -75rs,500Pages -120, 800 pages -150rs, 1000 pages -160Rs



11. total Earnings by Library.

```
nysql> select sum(CostPerDay*DaysBookRatained) as TotalEarnings from BooksBorrowed join cost on BooksBorrowed.DaysBookRatained<=cost
.MaxPages;
| TotalEarnings |
| 117668 |
| row in set (0.00 sec)
```

12. Amount paid by each customer. Rank the customers based in amount paid.

nysql> select customers.CustomerName, sum(CostPerDay*DaysBookRetained) as Total_Amount from BooksBorrowed join customers on BooksBorrowed.CustomerID=customers.CustomerID join Books on BooksBorrowed.BooksID=Books.BooksID join cost on Books.pages<=cost.MaxPages group by customers.CustomerName order by Total_Amount Desc;

CustomerName	Total_Amount
Gopal	15480
Priya	14620
Hartnt	14198
Kyatht	8880
Balajt	8170
Teja	7310
Bhargavt	6060
Syan	4340
Sat	4030
Nithin	3160

10 rows in set (0.00 sec)

mysal>