PROJECT REPORT

DATABASE MANAGEMENT SYSTEMS (CT-257)

LIBRARY MANAGEMENT SYSTEM

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Batch	2019
Year	Second
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ORGANAIZATION INTRODUCTION:

Our system is based on library management and book-keeping system. This project “Library Management System” contains datarelevant to the books present in the library, which can be lent to the customers and details maintained by the staff. Along with the management of the system, we are also maintaining the records of issue statuses and publishers of the books.

FACT-FINDING PROCESS:

The need for the given DBMS arose when it was relevant that keeping track of issued books to multiple customers with the issuance data was essential as to keep the record of customer’s account with the branch. Furthermore, to avoid any security breaches as well as data loss; authentication system for staff was designed. For the creation of this DBMS project; MySQL is used as database while MySQL-CMD & MySQL workbench are used as a tool.

MISSION OBJECTIVE:

The objective of the project is to provide ease in feasibility to bothstaff and customers. According to this specific demand lending ofbooks was done by making registration of the customer in a branch so that may track the data not only relevant to the customer but to the branch itself. Meanwhile, customer can generate an issuance status after

borrowing a book to keep the track of it. In addition, the staff is enabled to maintain and updatethe status of all the books in the library.

MAJOR VIEWS:

- Employee view having access to name, log ID, branch ID and address of that specific employee.
- View for the working staff having grants to Issued book and customer's name.
- Available books contained View for the new customer with branch and book information provided to it.
- New staff view for the manager just to keep data organized for new employees separately.

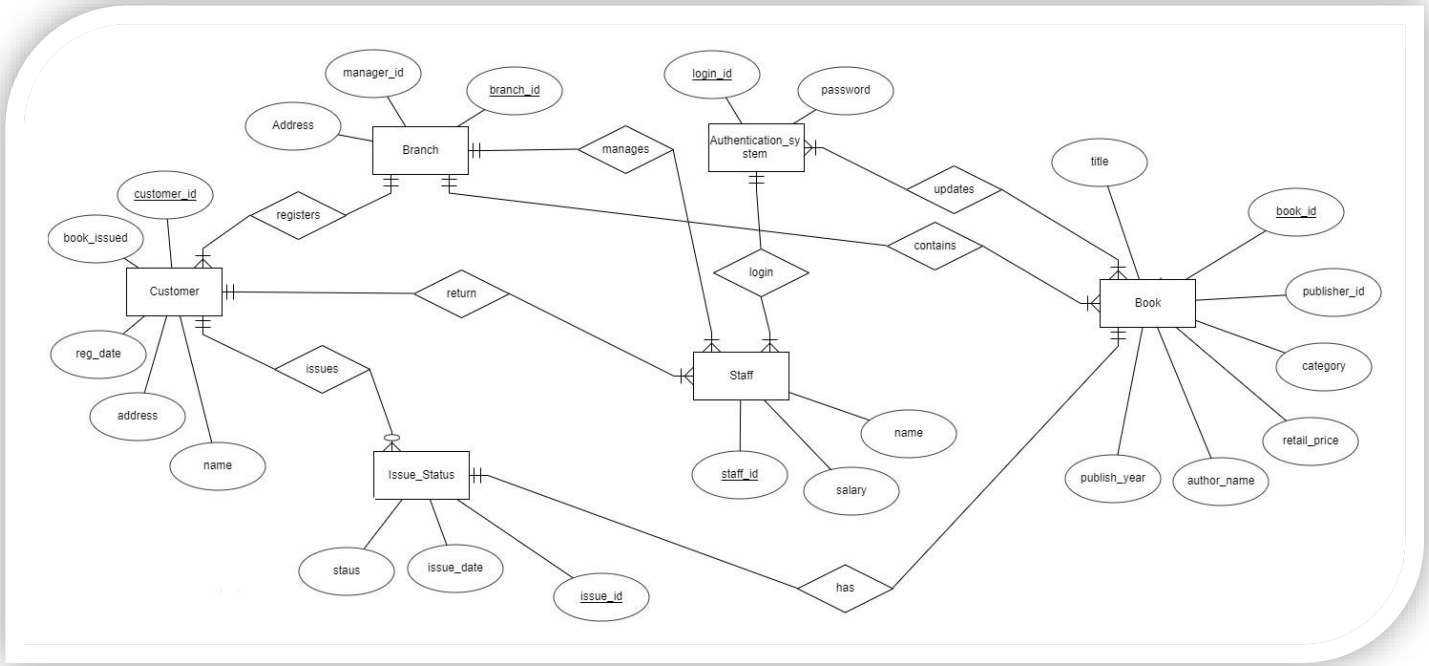
MAJOR DEPICTING CARDINALITIES:

- Multiple customers using the same branch.
- Multiple books borrowed by the same customer.
- Books of different categories in specification with respect to author and publisher.
- Each book issued by every customer has a separate Issue status.

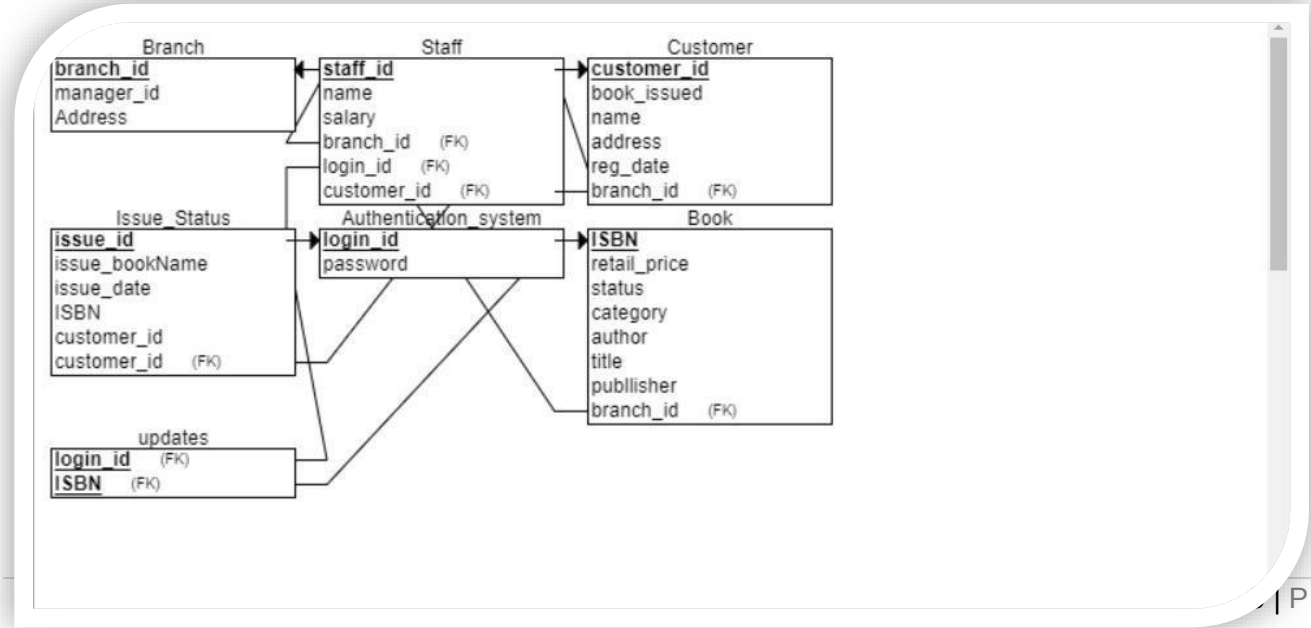
SCENARIO:

Considering a use case of a customer arriving at a library having specific distinct branch ID. The available books in the library appears in the form of a view which restricts the customer to only look and check those books which are available on the current date. Books are managed by the Staff. Each staff has their own identity of authentication and sign in. When a customer takes a book from library a Status of Issuance is released by the staff in order to keep the track of the lend book. The Issue status gets updated time to time depicting current status of the book.

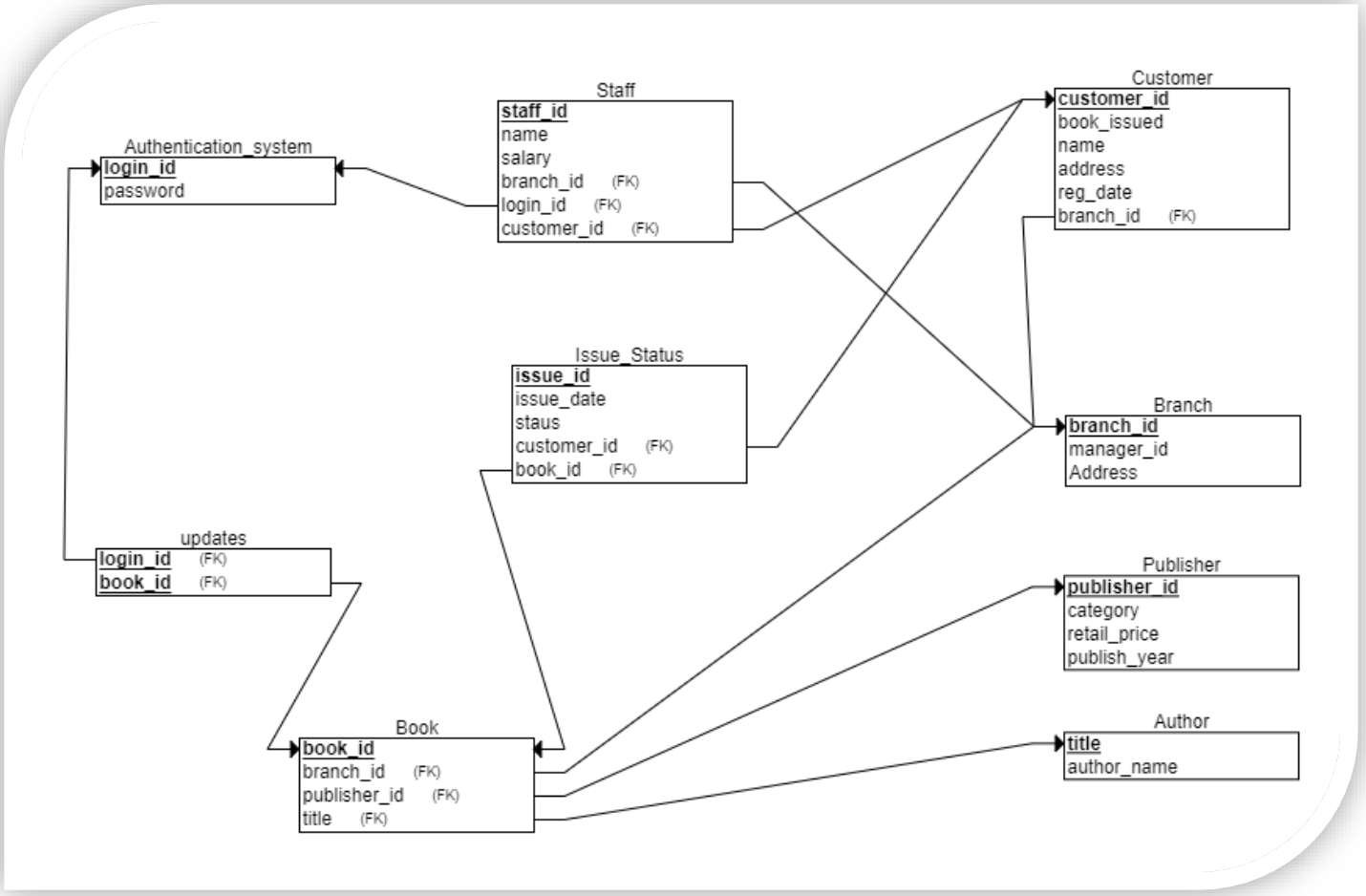
ERD:



OLD RELATIONAL SCHEMA:



FINAL RELATIONAL SCHEMA (3rd Normal Form):



SQL CODE:

```
CREATE TABLE Branch
(
 manager_id INT NOT NULL,
 branch_id INT NOT NULL,
 Address VARCHAR(255) NOT NULL,
 PRIMARY KEY (branch_id)
);

CREATE TABLE Customer
(
 customer_id INT NOT NULL,
 book_issued VARCHAR(255) NOT NULL,
 name VARCHAR(255) NOT NULL,
 address VARCHAR(255) NOT NULL,
 reg_date VARCHAR(255) NOT NULL,
 branch_id INT NOT NULL,
 PRIMARY KEY (customer_id),
 FOREIGN KEY (branch_id) REFERENCES Branch(branch_id)
);

CREATE TABLE Authentication_system
(
 login_id INT NOT NULL,
 password VARCHAR(255) NOT NULL,
 PRIMARY KEY (login_id)
);

CREATE TABLE Publisher
(
 publisher_id INT NOT NULL,
 category VARCHAR(255) NOT NULL,
 retail_price INT NOT NULL,
 publish_year INT NOT NULL,
 PRIMARY KEY (publisher_id)
);
```

```
CREATE TABLE Author
(
 title VARCHAR(255) NOT NULL,
 author_name VARCHAR(255) NOT NULL,
 PRIMARY KEY (title)
);

CREATE TABLE Staff
(
 staff_id INT NOT NULL,
 name VARCHAR(255) NOT NULL,
 salary INT NOT NULL,
 branch_id INT NOT NULL,
 login_id INT NOT NULL,
 customer_id INT NOT NULL,
 PRIMARY KEY (staff_id),
 FOREIGN KEY (branch_id) REFERENCES Branch(branch_id),
 FOREIGN KEY (login_id) REFERENCES Authentication_system(login_id),
 FOREIGN KEY (customer_id) REFERENCES Customer(customer_id)
);

CREATE TABLE Book
(
 book_id INT NOT NULL,
 branch_id INT NOT NULL,
 publisher_id INT NOT NULL,
 title VARCHAR(255) NOT NULL,
 PRIMARY KEY (book_id),
 FOREIGN KEY (branch_id) REFERENCES Branch(branch_id),
 FOREIGN KEY (publisher_id) REFERENCES Publisher(publisher_id),
 FOREIGN KEY (title) REFERENCES Author(title)
);

CREATE TABLE updates
(
 login_id INT NOT NULL,
 book_id INT NOT NULL,
```

```
  PRIMARY KEY (login_id, book_id),
  FOREIGN KEY (login_id) REFERENCES Authentication_system(login_id),
  FOREIGN KEY (book_id) REFERENCES Book(book_id)
);

CREATE TABLE Issue_Status
(
  issue_id INT NOT NULL,
  issue_date VARCHAR(255) NOT NULL,
  staus VARCHAR(255) NOT NULL,
  customer_id INT NOT NULL,
  book_id INT NOT NULL,
  PRIMARY KEY (issue_id),
  FOREIGN KEY (customer_id) REFERENCES Customer(customer_id),
  FOREIGN KEY (book_id) REFERENCES Book(book_id)
);
```

```
mysql> CREATE TABLE Branch
    -> (
    ->   manager_id INT NOT NULL,
    ->   branch_id INT NOT NULL,
    ->   Address VARCHAR(255) NOT NULL,
    ->   PRIMARY KEY (branch_id)
    -> );
Query OK, 0 rows affected (0.08 sec)

mysql> CREATE TABLE Customer
    -> (
    ->   customer_id INT NOT NULL,
    ->   book_issued VARCHAR(255) NOT NULL,
    ->   name VARCHAR(255) NOT NULL,
    ->   address VARCHAR(255) NOT NULL,
    ->   reg_date VARCHAR(255) NOT NULL,
    ->   branch_id INT NOT NULL,
    ->   PRIMARY KEY (customer_id),
    ->   FOREIGN KEY (branch_id) REFERENCES Branch(branch_id)
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql>
mysql> CREATE TABLE Authentication_system
    -> (
    ->   login_id INT NOT NULL,
    ->   password VARCHAR(255) NOT NULL,
    ->   PRIMARY KEY (login_id)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE Publisher
    -> (
    ->   publisher_id INT NOT NULL,
    ->   category VARCHAR(255) NOT NULL,
    ->   retail_price INT NOT NULL,
    ->   publish_year INT NOT NULL,
    ->   PRIMARY KEY (publisher_id)
    -> );
Query OK, 0 rows affected (0.05 sec)
```

```
mysql>
mysql> CREATE TABLE Author
    -> (
    ->   title VARCHAR(255) NOT NULL,
    ->   author_name VARCHAR(255) NOT NULL,
    ->   PRIMARY KEY (title)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql>
mysql> CREATE TABLE Staff
    -> (
    ->   staff_id INT NOT NULL,
    ->   name VARCHAR(255) NOT NULL,
    ->   salary INT NOT NULL,
    ->   branch_id INT NOT NULL,
    ->   login_id INT NOT NULL,
    ->   customer_id INT NOT NULL,
    ->   PRIMARY KEY (staff_id),
    ->   FOREIGN KEY (branch_id) REFERENCES Branch(branch_id),
    ->   FOREIGN KEY (login_id) REFERENCES Authentication_system(login_id),
    ->   FOREIGN KEY (customer_id) REFERENCES Customer(customer_id)
    -> );
Query OK, 0 rows affected (0.09 sec)

mysql>
mysql> CREATE TABLE Book
    -> (
    ->   book_id INT NOT NULL,
    ->   branch_id INT NOT NULL,
    ->   publisher_id INT NOT NULL,
    ->   title VARCHAR(255) NOT NULL,
    ->   PRIMARY KEY (book_id),
    ->   FOREIGN KEY (branch_id) REFERENCES Branch(branch_id),
    ->   FOREIGN KEY (publisher_id) REFERENCES Publisher(publisher_id),
    ->   FOREIGN KEY (title) REFERENCES Author(title)
    -> );
Query OK, 0 rows affected (0.08 sec)
```

```
mysql>
mysql> CREATE TABLE updates
    -> (
    ->   login_id INT NOT NULL,
    ->   book_id INT NOT NULL,
    ->   PRIMARY KEY (login_id, book_id),
    ->   FOREIGN KEY (login_id) REFERENCES Authentication_system(login_id),
    ->   FOREIGN KEY (book_id) REFERENCES Book(book_id)
    -> );
Query OK, 0 rows affected (0.06 sec)

mysql>
mysql> CREATE TABLE Issue_Status
    -> (
    ->   issue_id INT NOT NULL,
    ->   issue_date VARCHAR(255) NOT NULL,
    ->   staus VARCHAR(255) NOT NULL,
    ->   customer_id INT NOT NULL,
    ->   book_id INT NOT NULL,
    ->   PRIMARY KEY (issue_id),
    ->   FOREIGN KEY (customer_id) REFERENCES Customer(customer_id),
    ->   FOREIGN KEY (book_id) REFERENCES Book(book_id) );
Query OK, 0 rows affected (0.07 sec)
```

TABLES:

ALL TABLES

```
mysql> use librarysystem;
Database changed
mysql> SHOW TABLES;
+-------------------------+
| Tables_in_librarysystem |
+-------------------------+
| authentication_system   |
| author                  |
| book                    |
| branch                  |
| customer                |
| issue_status            |
| publisher               |
| staff                   |
| updates                 |
+-------------------------+
9 rows in set (0.01 sec)
```

SELECT CLAUSE:

USE librarysytem;

SELECT *
FROM authentication_system;

```
mysql> SELECT * FROM authentication_system;
+----------+----------+
| login_id | password |
+----------+----------+
|        1 | 100      |
|        2 | 200      |
|        3 | 300      |
|        4 | 400      |
|        5 | 500      |
|        6 | 600      |
|        7 | 700      |
|        8 | 800      |
|        9 | 900      |
|       10 | 1100     |
|       11 | 1200     |
|       12 | 1300     |
|       13 | 1400     |
|       14 | 1500     |
|       15 | 1600     |
+----------+----------+
15 rows in set (0.00 sec)
```

DESC author;

SELECT title, author_name AS Author
FROM author;

SELECT * FROM book;

```
mysql> SELECT * FROM book;
+---------+-----------+--------------+-------------------------------+
| book_id | branch_id | publisher_id | title                         |
+---------+-----------+--------------+-------------------------------+
|     101 |       264 |          665 | Fallen                        |
|     102 |       267 |         2003 | Echo Foxtrot                  |
|     103 |       268 |          505 | Nitrate                       |
|     104 |       267 |          500 | Shawshank Redemption          |
|     106 |       266 |          800 | The lost gem                  |
|     107 |       266 |          909 | Radio-bots                    |
|     108 |       265 |          836 | VIP                           |
|     109 |       266 |          999 | The Teacher                   |
|     110 |       268 |        10003 | Duckly Inheritance            |
|     111 |       265 |          603 | Nazi and Hitler               |
|     112 |       266 |         6660 | Quantam Mechanics             |
|     113 |       269 |          999 | Family                        |
|     114 |       270 |           40 | Harry Potter and Golden Globe |
|     115 |       271 |          210 | Nazi Hitler                   |
|     116 |       271 |          700 | Road to Independent State     |
+---------+-----------+--------------+-------------------------------+
15 rows in set (0.00 sec)
```

SELECT * FROM author;

```
mysql> SELECT * FROM author;
+-------------------------------+-------------------+
| title                         | author_name       |
+-------------------------------+-------------------+
| Deathly Hollows               | Pat Cummins       |
| Duckly Inheritance            | Ahmed Mustaqeem   |
| Echo Foxtrot                  | Thiery Henry      |
| Fallen                        | Hasan Ashfaq      |
| Family                        | Dwayne Van Diesel |
| Harry Potter and Golden Globe | Robert Snjider    |
| Nazi and Hitler               | Robin Scpahnzk    |
| Nazi Hitler                   | Robin Scpahnzky   |
| Nitrate                       | Kevin Phillips    |
| Quantam Mechanics             | Jack Wandepilasch |
| Radio-bots                    | Madem Curie       |
| Road to Independent State     | Bushra Khan       |
| Shawshank Redemption          | Camy Kin          |
| The lost gem                  | Van Buyten        |
| The Teacher                   | Elon Musk         |
| VIP                           | Jeff Bezoz        |
+-------------------------------+-------------------+
16 rows in set (0.00 sec)
```

SELECT * FROM branch;

```
mysql> SELECT * FROM branch;
+------------+-----------+-----------------+
| manager_id | branch_id | Address         |
+------------+-----------+-----------------+
|          1 |       264 | BLOCK-15,A-SITE |
|          2 |       265 | BLOCK-16,B-SITE |
|          3 |       266 | BLOCK-17,C-SITE |
|          4 |       267 | BLOCK-18,D-SITE |
|          5 |       268 | BLOCK-19,E-SITE |
|          6 |       269 | BLOCK-20,F-SITE |
|          7 |       270 | BLOCK-20,G-SITE |
|          8 |       271 | BLOCK-22,G-SITE |
|          9 |       272 | BLOCK-21,I-SITE |
|         10 |       273 | BLOCK-23,J-SITE |
+------------+-----------+-----------------+
10 rows in set (0.00 sec)
```

SELECT * FROM customer;

```
mysql> SELECT * FROM customer;
+-------------+-------------------------------+---------+---------------------+----------+-----------+
| customer_id | book_issued                   | name    | address             | reg_date | branch_id |
+-------------+-------------------------------+---------+---------------------+----------+-----------+
|           1 | Fallen                        | Ali     | BLOCK-1,A-SITE      | 190121   |       264 |
|           2 | VIP                           | Ammar   | BLOCK-2,A-SITE      | 200121   |       265 |
|           3 | The Teacher                   | Azan    | BLOCK-3,A-SITE      | 210121   |       266 |
|           4 | Echo Foxtrot                  | Aleeza  | BLOCK-4,A-SITE      | 220121   |       267 |
|           5 | Nitrate                       | Armaan  | BLOCK-5,A-SITE      | 230121   |       268 |
|           6 | Shawshank Redemption          | Zunaira | P.E.C.H.S BLOCK 2   | 70621    |       267 |
|           7 | Nazi and Hitler               | Haseeb  | P.E.C.H.S BLOCK6    | 200721   |       265 |
|           8 | Quantam Mechanics             | Maham   | Newtown Subway      | 201021   |       266 |
|           9 | Duckly Inheritance            | Rafay   | Maskan Street 94-A  | 201021   |       268 |
|          10 | EMF And world                 | Sami    | Nazimabad Block 1   | 201021   |       268 |
|          11 | Radio-bots                    | Safeer  | BLOCK-9,A-SITE      | 50721    |       266 |
|          12 | The lost gem                  | Navira  | BLOCK-9,A-SITE      | 50721    |       266 |
|          13 | Family                        | Mushraf | K2 BLOCK 3 8-D      | 6020     |       269 |
|          14 | Harry Potter and Golden Globe | Shiza   | DHA Phase V-AB Town | 200601   |       270 |
|          15 | Nazi Hitler                   | Hashir  | K2 BLOCK 3 4-D      | 300199   |       271 |
+-------------+-------------------------------+---------+---------------------+----------+-----------+
15 rows in set (0.00 sec)
```

SELECT * FROM issue_status;

```
mysql> SELECT * FROM issue_status;
+----------+------------+-----------------+-------------+---------+
| issue_id | issue_date | staus           | customer_id | book_id |
+----------+------------+-----------------+-------------+---------+
|       11 | 201121     | returned        |           1 |     101 |
|       12 | 200721     | loaned          |           4 |     102 |
|       13 | 100121     | returned        |           5 |     103 |
|       14 | 101021     | extended tenure |           6 |     104 |
|       15 | 91221      | returned        |          12 |     106 |
|       16 | 90521      | not returned    |          11 |     107 |
|       17 | 110821     | returned        |           2 |     108 |
|       18 | 100921     | returned        |           3 |     109 |
|       19 | 200701     | returned        |           7 |     111 |
|       20 | 200701     | returned        |           6 |     112 |
+----------+------------+-----------------+-------------+---------+
10 rows in set (0.00 sec)
```

SELECT * FROM publisher;

```
mysql> SELECT * FROM publisher;
+--------------+----------------------+--------------+--------------+
| publisher_id | category             | retail_price | publish_year |
+--------------+----------------------+--------------+--------------+
|           40 | horror               |          700 |         2000 |
|          210 | fiction              |         7000 |         2002 |
|          500 | mystery              |         8000 |         2016 |
|          505 | sci-fi               |         3500 |         2006 |
|          603 | history              |          200 |         1999 |
|          665 | melo-drama           |          780 |         2010 |
|          700 | drama                |          990 |         2007 |
|          800 | sci-fi               |         2400 |         2008 |
|          836 | biography            |         9000 |         2014 |
|          909 | fiction              |         9000 |         2012 |
|          999 | stage-play act       |          900 |         2018 |
|         2003 | geographical plotted |        30000 |         2009 |
|         6660 | Science              |         5000 |         1996 |
|        10003 | strategy             |        20000 |         2019 |
+--------------+----------------------+--------------+--------------+
14 rows in set (0.00 sec)
```

SELECT * FROM staff;

```
mysql> SELECT * FROM staff;
+----------+----------+--------+-----------+----------+-------------+
| staff_id | name     | salary | branch_id | login_id | customer_id |
+----------+----------+--------+-----------+----------+-------------+
|        1 | Burki    |   2000 |       264 |        1 |           1 |
|        2 | Boose    |   3000 |       265 |        2 |           2 |
|        3 | Burhan   |   4000 |       266 |        3 |           3 |
|        4 | Tassaduq |   5000 |       267 |        4 |           4 |
|        5 | Burkan   |   6000 |       268 |        5 |           5 |
|        6 | Rohail   |   9000 |       267 |        6 |           6 |
|        7 | Zargham  |   9000 |       265 |        7 |           7 |
|        8 | Fareha   |   2500 |       266 |        8 |           8 |
|        9 | Kashif   |   1500 |       268 |        9 |           9 |
|       10 | Larosh   |   2000 |       268 |       10 |          10 |
|       11 | Saleha   |   2800 |       269 |       11 |          11 |
|       12 | Jonas    |   3000 |       270 |       12 |          12 |
|       13 | Malik    |   2600 |       271 |       13 |          13 |
+----------+----------+--------+-----------+----------+-------------+
13 rows in set (0.00 sec)
```

SELECT book_id AS "BOOK ID",publisher_id AS "PUBLISHER ID",title ||'has Book ID='|| book_id AS "DESCRIPTION"
FROM book;

```
mysql> SELECT book_id AS "BOOK ID",publisher_id AS "PUBLISHER ID",title || "has Book ID=" || book_id AS "DESCRIPTION" FROM book;
+---------+--------------+-------------+
| BOOK ID | PUBLISHER ID | DESCRIPTION |
+---------+--------------+-------------+
|     101 |          665 |           1 |
|     102 |         2003 |           1 |
|     103 |          505 |           1 |
|     104 |          500 |           1 |
|     106 |          800 |           1 |
|     107 |          909 |           1 |
|     108 |          836 |           1 |
|     109 |          999 |           1 |
|     110 |        10003 |           1 |
|     111 |          603 |           1 |
|     112 |         6660 |           1 |
|     113 |          999 |           1 |
|     114 |           40 |           1 |
|     115 |          210 |           1 |
|     116 |          700 |           1 |
+---------+--------------+-------------+
```

SELECT customer_id, book_issued AS "BOOK",name AS "CUSTOMER", address
FROM customer;

```
mysql> SELECT customer_id,book_issued AS "BOOK",name AS "CUSTOMER", address FROM customer;
+-------------+-------------------------------+----------+----------------------+
| customer_id | BOOK                          | CUSTOMER | address              |
+-------------+-------------------------------+----------+----------------------+
|           1 | Fallen                        | Ali      | BLOCK-1,A-SITE       |
|           2 | VIP                           | Ammar    | BLOCK-2,A-SITE       |
|           3 | The Teacher                   | Azan     | BLOCK-3,A-SITE       |
|           4 | Echo Foxtrot                  | Aleeza   | BLOCK-4,A-SITE       |
|           5 | Nitrate                       | Armaan   | BLOCK-5,A-SITE       |
|           6 | Shawshank Redemption          | Zunaira  | P.E.C.H.S BLOCK 2    |
|           7 | Nazi and Hitler               | Haseeb   | P.E.C.H.S BLOCK6     |
|           8 | Quantam Mechanics             | Maham    | Newtown Subway       |
|           9 | Duckly Inheritance            | Rafay    | Maskan Street 94-A   |
|          10 | EMF And world                 | Sami     | Nazimabad Block 1    |
|          11 | Radio-bots                    | Safeer   | BLOCK-9,A-SITE       |
|          12 | The lost gem                  | Navira   | BLOCK-9,A-SITE       |
|          13 | Family                        | Mushraf  | K2 BLOCK 3 8-D       |
|          14 | Harry Potter and Golden Globe | Shiza    | DHA Phase V-AB Town  |
|          15 | Nazi Hitler                   | Hashir   | K2 BLOCK 3 4-D       |
+-------------+-------------------------------+----------+----------------------+
```

INSERT CLAUSE:

INSERT
INTO book
VALUE(110,268,10003,"Duckly Inheritance");

```
mysql> use librarysystem;
Database changed
mysql> INSERT INTO book VALUE(110,268,10003,"Duckly Inheritance");
Query OK, 1 row affected (0.02 sec)
```

INSERT
INTO branch
VALUE(6,269,"BLOCK-20,F-SITE");

INSERT
INTO branch
VALUE(7,270,"BLOCK-20,G-SITE");

INSERT
INTO branch
VALUE(9,272,"BLOCK-21,I-SITE");

INSERT
INTO branch
VALUE(10,273,"BLOCK-23,J-SITE");

```
mysql> INSERT INTO branch VALUE(6,269,"BLOCK-20,F-SITE");
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO branch VALUE(7,270,"BLOCK-20,G-SITE");
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO branch VALUE(8,271,"BLOCK-22,G-SITE");
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO branch VALUE(9,272,"BLOCK-21,I-SITE");
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO branch VALUE(10,273,"BLOCK-23,J-SITE");
Query OK, 1 row affected (0.01 sec)
```

INSERT

INTO publisher
VALUE(6660,"Science",5000,1996);

INSERT
INTO author
VALUE("Nazi Hitler", "Robin Scpahnzky");

```
mysql> INSERT INTO author VALUE("Nazi Hitler", "Robin Scpahnzky");
Query OK, 1 row affected (0.01 sec)
```

INSERT
INTO issue_status
VALUE(19,200701,"returned",7,111);

```
ysql> INSERT INTO publisher VALUE(6660,"Science",5000,1996);
Query OK, 1 row affected (0.01 sec)
```

CONDITIONAL CLAUSE:

SELECT book_issued AS "Book", name AS "Customer", address
FROM customer
WHERE (branch_id=265 OR branch_id=266) AND address LIKE "%BL%";

```
mysql> SELECT book_issued AS "Book", name AS "Customer", address FROM customer WHERE (branch_id=265 OR branch_id=266) AND address LIKE "%BL%";
+----------------+----------+------------------+
| Book           | Customer | address          |
+----------------+----------+------------------+
| VIP            | Ammar    | BLOCK-2,A-SITE   |
| Nazi and Hitler | Haseeb   | P.E.C.H.S BLOCK6 |
| The Teacher    | Azan     | BLOCK-3,A-SITE   |
| Radio-bots     | Safeer   | BLOCK-9,A-SITE   |
| The lost gem   | Navira   | BLOCK-9,A-SITE   |
+----------------+----------+------------------+
5 rows in set (0.00 sec)
```

SELECT category,publisher_id AS "ID",publish_year AS "YEAR"
FROM publisher
WHERE retail_price > 800;

```
mysql> SELECT category,publisher_id AS "ID",publish_year AS "YEAR" FROM publisher WHERE retail_price > 800;
+----------------------+-------+------+
| category             | ID    | YEAR |
+----------------------+-------+------+
| fiction              |   210 | 2002 |
| mystery              |   500 | 2016 |
| sci-fi               |   505 | 2006 |
| drama                |   700 | 2007 |
| sci-fi               |   800 | 2008 |
| biography            |   836 | 2014 |
| fiction              |   909 | 2012 |
| stage-play act       |   999 | 2018 |
| geographical plotted |  2003 | 2009 |
| strategy             | 10003 | 2019 |
+----------------------+-------+------+
10 rows in set (0.00 sec)
```

SELECT book_id,issue_id,staus
FROM issue_status
WHERE staus
LIKE "_e%";

```
mysql> SELECT book_id,issue_id,staus FROM issue_status WHERE staus LIKE "_e%";
+---------+----------+----------+
| book_id | issue_id | staus    |
+---------+----------+----------+
|     101 |       11 | returned |
|     103 |       13 | returned |
|     106 |       15 | returned |
|     108 |       17 | returned |
|     109 |       18 | returned |
+---------+----------+----------+
5 rows in set (0.00 sec)
```

SELECT name AS EMPLOYEES,branch_id AS BRANCH
FROM staff
WHERE salary BETWEEN 2500 AND 5500;

```
mysql> SELECT name AS EMPLOYEES,branch_id AS BRANCH FROM staff WHERE salary BETWEEN 2500 AND 5500;
+-----------+--------+
| EMPLOYEES | BRANCH |
+-----------+--------+
| Boose     |    265 |
| Burhan    |    266 |
| Tassaduq  |    267 |
+-----------+--------+
3 rows in set (0.00 sec)
```

SELECT title,author_name AS AUTHOR
FROM author
WHERE title
LIKE "%s%";

```
mysql> SELECT title,author_name AS AUTHOR FROM author WHERE title LIKE "%s%";
+--------------------------+-------------+
| title                    | AUTHOR      |
+--------------------------+-------------+
| Deathly Hollows          | Pat Cummins |
| Radio-bots               | Madem Curie |
| Road to Independent State | Bushra Khan |
| Shawshank Redemption     | Camy Kin    |
| The lost gem             | Van Buyten  |
+--------------------------+-------------+
5 rows in set (0.00 sec)
```

JOINS CLAUSE:

SELECT staff.name,staff.login_id,authentication_system.password
FROM staff
INNER JOIN authentication_system
ON staff.login_id = authentication_system.login_id;

```
mysql> SELECT staff.name,staff.login_id,authentication_system.password FROM staff INNER JOIN authentication_system ON staff.login_id = authentication_system.login_id;
+----------+----------+----------+
| name     | login_id | password |
+----------+----------+----------+
| Burki    |        1 | 100      |
| Boose    |        2 | 200      |
| Burhan   |        3 | 300      |
| Tassaduq |        4 | 400      |
| Burkan   |        5 | 500      |
+----------+----------+----------+
5 rows in set (0.01 sec)
```

SELECT staff.name,authentication_system.password
FROM staff
LEFT JOIN authentication_system
ON staff.login_id = authentication_system.login_id;

```
mysql> SELECT staff.name,authentication_system.password FROM staff LEFT JOIN authentication_system ON staff.login_id = authentication_system.login_id;
+----------+----------+
| name     | password |
+----------+----------+
| Burki    | 100      |
| Boose    | 200      |
| Burhan   | 300      |
| Tassaduq | 400      |
| Burkan   | 500      |
+----------+----------+
5 rows in set (0.00 sec)
```

SELECT book.title,book.publisher_id,issue_status.staus
FROM book
RIGHT JOIN issue_status
ON book.book_id = issue_status.book_id;

```
mysql> SELECT book.title,book.publisher_id,issue_status.staus FROM book RIGHT JOIN issue_status ON book.book_id = issue_status.book_id;
+----------------------+--------------+-----------------+
| title                | publisher_id | staus           |
+----------------------+--------------+-----------------+
| Fallen               |          665 | returned        |
| Echo Foxtrot         |         2003 | loaned          |
| Nitrate              |          505 | returned        |
| Shawshank Redemption |          500 | extended tenure |
| The lost gem         |          800 | returned        |
| Radio-bots           |          909 | not returned    |
| VIP                  |          836 | returned        |
| The Teacher          |          999 | returned        |
+----------------------+--------------+-----------------+
8 rows in set (0.01 sec)
```

SELECT *
FROM branch
CROSS JOIN staff;

```
mysql> SELECT * FROM branch CROSS JOIN staff;
+------------+-----------+-----------------+----------+---------+--------+-----------+----------+-------------+
| manager_id | branch_id | Address         | staff_id | name    | salary | branch_id | login_id | customer_id |
+------------+-----------+-----------------+----------+---------+--------+-----------+----------+-------------+
|          1 |       264 | BLOCK-15,A-SITE |        1 | Burki   |   2000 |       264 |        1 |           1 |
|          2 |       265 | BLOCK-16,B-SITE |        1 | Burki   |   2000 |       264 |        1 |           1 |
|          3 |       266 | BLOCK-17,C-SITE |        1 | Burki   |   2000 |       264 |        1 |           1 |
|          4 |       267 | BLOCK-18,D-SITE |        1 | Burki   |   2000 |       264 |        1 |           1 |
|          5 |       268 | BLOCK-19,E-SITE |        1 | Burki   |   2000 |       264 |        1 |           1 |
|          1 |       264 | BLOCK-15,A-SITE |        2 | Boose   |   3000 |       265 |        2 |           2 |
|          2 |       265 | BLOCK-16,B-SITE |        2 | Boose   |   3000 |       265 |        2 |           2 |
|          3 |       266 | BLOCK-17,C-SITE |        2 | Boose   |   3000 |       265 |        2 |           2 |
|          4 |       267 | BLOCK-18,D-SITE |        2 | Boose   |   3000 |       265 |        2 |           2 |
|          5 |       268 | BLOCK-19,E-SITE |        2 | Boose   |   3000 |       265 |        2 |           2 |
|          1 |       264 | BLOCK-15,A-SITE |        3 | Burhan  |   4000 |       266 |        3 |           3 |
|          2 |       265 | BLOCK-16,B-SITE |        3 | Burhan  |   4000 |       266 |        3 |           3 |
|          3 |       266 | BLOCK-17,C-SITE |        3 | Burhan  |   4000 |       266 |        3 |           3 |
|          4 |       267 | BLOCK-18,D-SITE |        3 | Burhan  |   4000 |       266 |        3 |           3 |
|          5 |       268 | BLOCK-19,E-SITE |        3 | Burhan  |   4000 |       266 |        3 |           3 |
|          1 |       264 | BLOCK-15,A-SITE |        4 | Tassaduq |   5000 |       267 |        4 |           4 |
|          2 |       265 | BLOCK-16,B-SITE |        4 | Tassaduq |   5000 |       267 |        4 |           4 |
|          3 |       266 | BLOCK-17,C-SITE |        4 | Tassaduq |   5000 |       267 |        4 |           4 |
|          4 |       267 | BLOCK-18,D-SITE |        4 | Tassaduq |   5000 |       267 |        4 |           4 |
|          5 |       268 | BLOCK-19,E-SITE |        4 | Tassaduq |   5000 |       267 |        4 |           4 |
|          1 |       264 | BLOCK-15,A-SITE |        5 | Burkan  |   6000 |       268 |        5 |           5 |
|          2 |       265 | BLOCK-16,B-SITE |        5 | Burkan  |   6000 |       268 |        5 |           5 |
|          3 |       266 | BLOCK-17,C-SITE |        5 | Burkan  |   6000 |       268 |        5 |           5 |
|          4 |       267 | BLOCK-18,D-SITE |        5 | Burkan  |   6000 |       268 |        5 |           5 |
|          5 |       268 | BLOCK-19,E-SITE |        5 | Burkan  |   6000 |       268 |        5 |           5 |
+------------+-----------+-----------------+----------+---------+--------+-----------+----------+-------------+
25 rows in set (0.01 sec)
```

SINGLE-ROW FUNCTIONS CLAUSE:

```
SELECT title,author_name AS AUTHOR
FROM author
WHERE LOWER(author_name)
LIKE "%k%";
```

```
mysql> SELECT title,author_name AS AUTHOR FROM author WHERE LOWER(author_name) LIKE "%k%";
+---------------------------+----------------+
| title                     | AUTHOR         |
+---------------------------+----------------+
| Nitrate                   | Kevin Phillips |
| Road to Independent State | Bushra Khan    |
| Shawshank Redemption      | Camy Kin       |
| The Teacher               | Elon Musk      |
+---------------------------+----------------+
4 rows in set (0.00 sec)
```

```
SELECT customer_id,CONCAT(book_issued,name)
FROM customer
WHERE branch_id
BETWEEN 264 AND 266;
```

```
mysql> SELECT customer_id,CONCAT(book_issued,name) FROM customer WHERE branch_id BETWEEN 264 AND 266;
+-------------+--------------------------+
| customer_id | CONCAT(book_issued,name) |
+-------------+--------------------------+
|           1 | FallenAli                |
|           2 | VIPAmmar                 |
|           7 | Nazi and HitlerHaseeb    |
|           3 | The TeacherAzan          |
|           8 | Quantam MechanicsMaham   |
|          11 | Radio-botsSafeer         |
|          12 | The lost gemNavira       |
+-------------+--------------------------+
7 rows in set (0.00 sec)
```

SELECT SUBSTR(title,1,5)
FROM book
WHERE branch_id > 264;

```
mysql> SELECT SUBSTR(title,1,5) FROM book WHERE branch_id > 264;
+-------------------+
| SUBSTR(title,1,5) |
+-------------------+
| VIP               |
| The l             |
| Radio             |
| The T             |
| Echo              |
| Shaws             |
| Nitra             |
+-------------------+
7 rows in set (0.00 sec)
```

SELECT RPAD(Address,4,'_')||LPAD (branch_id,1,'_')
FROM branch
WHERE manager_id > 1;

```
mysql> SELECT RPAD(Address,4,'_')||LPAD (branch_id,1,'_') FROM branch WHERE manager_id > 1;
+-------------------------------------------+
| RPAD(Address,4,'_')||LPAD (branch_id,1,'_') |
+-------------------------------------------+
|                                        1 |
|                                        1 |
|                                        1 |
|                                        1 |
+-------------------------------------------+
4 rows in set, 1 warning (0.00 sec)
```

SUB-QUERY CLAUSE:

```
SELECT *
FROM publisher
WHERE publish_year
IN (
SELECT publish_year
FROM publisher
WHERE retail_price > 500
);
```

```
mysql> SELECT * FROM publisher WHERE publish_year IN (SELECT publish_year FROM publisher WHERE retail_price > 500);
+--------------+----------------------+--------------+--------------+
| publisher_id | category             | retail_price | publish_year |
+--------------+----------------------+--------------+--------------+
|           40 | horror               |          700 |         2000 |
|          210 | fiction              |         7000 |         2002 |
|          500 | mystery              |         8000 |         2016 |
|          505 | sci-fi               |         3500 |         2006 |
|          665 | melo-drama           |          780 |         2010 |
|          700 | drama                |          990 |         2007 |
|          800 | sci-fi               |         2400 |         2008 |
|          836 | biography            |         9000 |         2014 |
|          909 | fiction              |         9000 |         2012 |
|          999 | stage-play act       |          900 |         2018 |
|         2003 | geographical plotted |        30000 |         2009 |
|        10003 | strategy             |        20000 |         2019 |
+--------------+----------------------+--------------+--------------+
12 rows in set (0.01 sec)
```

```
SELECT book_issued,name,reg_date
FROM customer
GROUP BY customer_id
HAVING customer_id >= (
SELECT MIN(customer_id)
FROM customer
WHERE customer_id> 4
);
```

```
mysql> SELECT book_issued,name,reg_date FROM customer GROUP BY customer_id HAVING customer_id >= (SELECT MIN(customer_id) FROM customer WHERE customer_id> 4);
+---------------------+---------+----------+
| book_issued         | name    | reg_date |
+---------------------+---------+----------+
| Nitrate             | Armaan  | 230121   |
| Shawshank Redemption | Zunaira | 70621    |
| Nazi and Hitler     | Haseeb  | 200721   |
| Quantam Mechanics   | Maham   | 201021   |
| Duckly Inheritance  | Rafay   | 201021   |
| EMF And world       | Sami    | 201021   |
| Radio-bots          | Safeer  | 50721    |
| The lost gem        | Navira  | 50721    |
+---------------------+---------+----------+
8 rows in set (0.00 sec)
```

```
SELECT *
FROM publisher
WHERE publish_year IN (
SELECT publish_year
FROM publisher
WHERE publish_year BETWEEN 1990 AND 2010
);
```

```
mysql> SELECT * FROM publisher WHERE publish_year IN (SELECT publish_year FROM publisher WHERE publish_year BETWEEN 1990 AND 2010);
+--------------+---------------------+--------------+--------------+
| publisher_id | category            | retail_price | publish_year |
+--------------+---------------------+--------------+--------------+
|           40 | horror              |          700 |         2000 |
|          210 | fiction             |         7000 |         2002 |
|          505 | sci-fi              |         3500 |         2006 |
|          603 | history             |          200 |         1999 |
|          665 | melo-drama          |          780 |         2010 |
|          700 | drama               |          990 |         2007 |
|          800 | sci-fi              |         2400 |         2008 |
|         2003 | geographical plotted |        30000 |         2009 |
+--------------+---------------------+--------------+--------------+
8 rows in set (0.00 sec)
```

```
SELECT *
FROM publisher
WHERE publish_year
IN (
SELECT publish_year
FROM publisher
WHERE publish_year > 2000
);
```

```
mysql> SELECT * FROM publisher WHERE publish_year IN (SELECT publish_year FROM publisher WHERE publish_year > 2000);
+--------------+---------------------+--------------+--------------+
| publisher_id | category            | retail_price | publish_year |
+--------------+---------------------+--------------+--------------+
|          210 | fiction             |         7000 |         2002 |
|          500 | mystery             |         8000 |         2016 |
|          505 | sci-fi              |         3500 |         2006 |
|          665 | melo-drama          |          780 |         2010 |
|          700 | drama               |          990 |         2007 |
|          800 | sci-fi              |         2400 |         2008 |
|          836 | biography           |         9000 |         2014 |
|          909 | fiction             |         9000 |         2012 |
|          999 | stage-play act      |          900 |         2018 |
|         2003 | geographical plotted |        30000 |         2009 |
|        10003 | strategy            |        20000 |         2019 |
+--------------+---------------------+--------------+--------------+
11 rows in set (0.00 sec)
```

```
SELECT *
FROM updates
WHERE login_id
IN (
SELECT login_id
FROM updates
WHERE login_id > 2
);
```

```
ysql> SELECT * FROM updates WHERE login_id IN (SELECT login_id FROM updates WHERE login_id > 2);
----------+---------+
 login_id | book_id |
----------+---------+
        3 |     109 |
        4 |     102 |
        5 |     103 |
----------+---------+
 rows in set (0.00 sec)
```

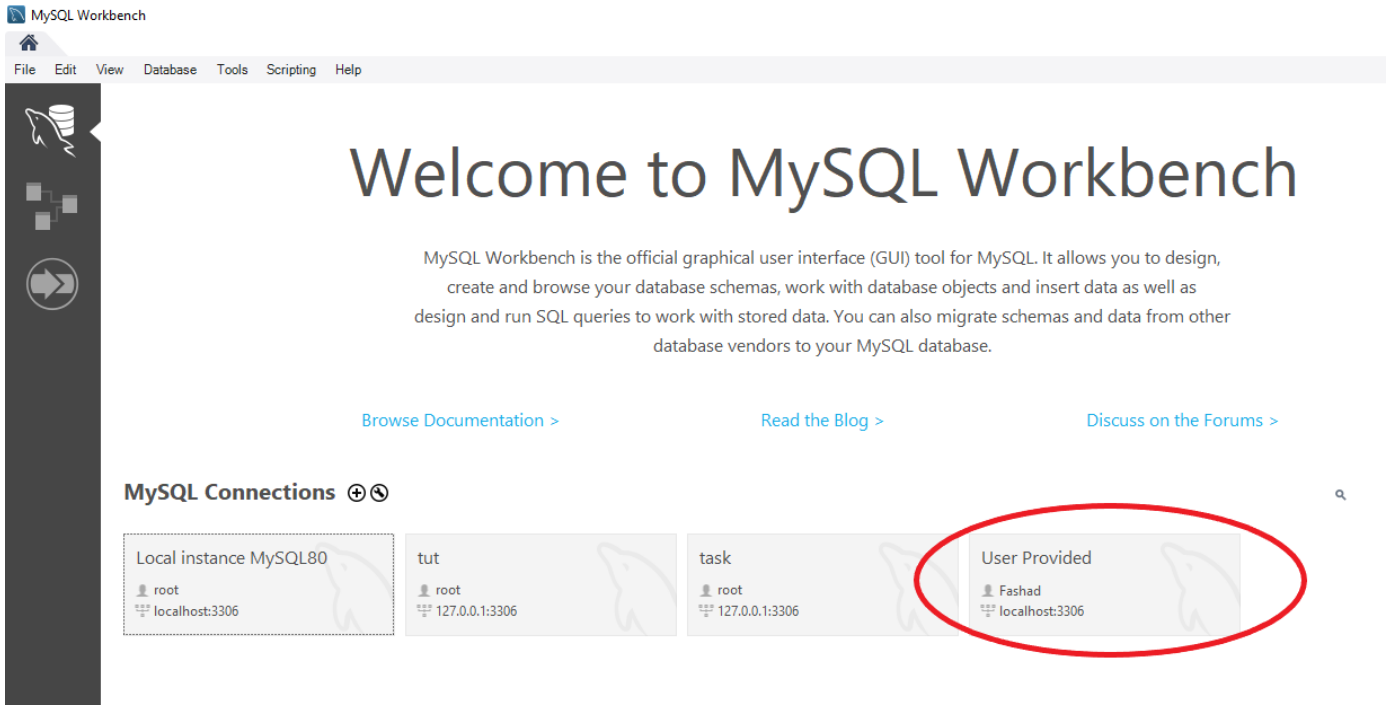
```
SELECT *
FROM branch
WHERE branch_id
IN (
SELECT branch_id
FROM branch
WHERE branch_id=265
);
```

```
mysql> SELECT * FROM branch WHERE branch_id IN (SELECT branch_id FROM branch WHERE branch_id=265);
+------------+-----------+-----------------+
| manager_id | branch_id | Address         |
+------------+-----------+-----------------+
|          2 |       265 | BLOCK-16,B-SITE |
+------------+-----------+-----------------+
1 row in set (0.00 sec)
```

USER-PRIVELAGES CLAUSE:

```
CREATE
 USER 'Fashad'@'localhost'
 IDENTIFIED BY 'AminoAcid';
```

```
mysql> use librarysystem;
Database changed
mysql> CREATE USER 'Fashad'@'localhost' IDENTIFIED BY 'AminoAcid';
Query OK, 0 rows affected (0.04 sec)
```

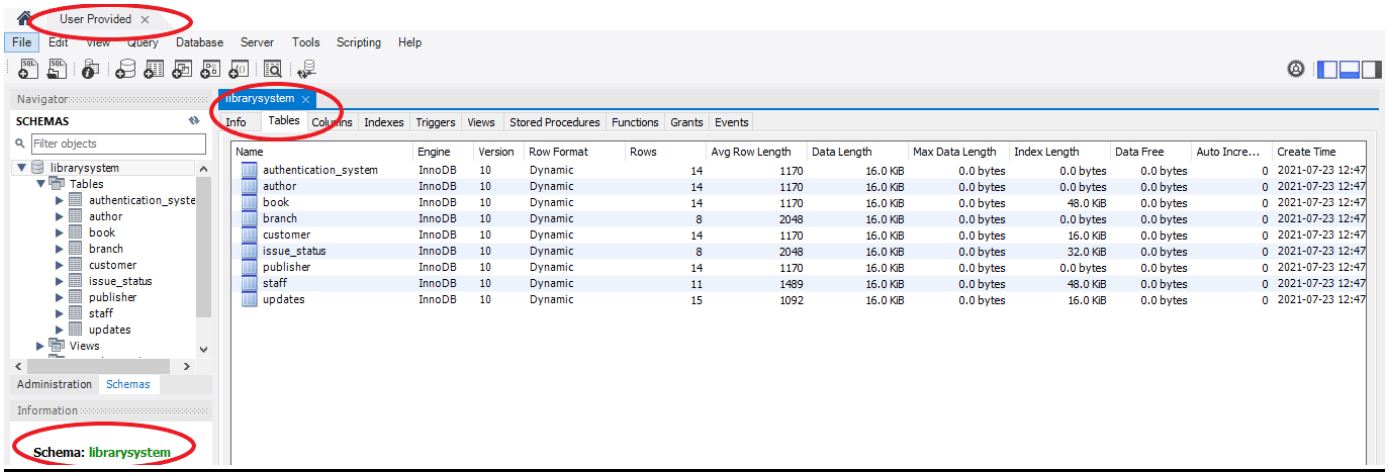



```
select Host,user
 from mysql.user;
```

```
mysql> select Host,user from mysql.user;
+-----------+------------------+
| Host      | user             |
+-----------+------------------+
| localhost | Fashad           |
| localhost | mysql.infoschema |
| localhost | mysql.session    |
| localhost | mysql.sys        |
| localhost | root             |
+-----------+------------------+
5 rows in set (0.00 sec)
```

GRANT All ON librarysystem.*
TO 'Fashad'@'localhost'
WITH GRANT OPTION;

```
mysql> GRANT All ON librarysystem.* TO 'Fashad'@'localhost' WITH GRANT OPTION;
Query OK, 0 rows affected (0.01 sec)
```



SELECT book.title,book.publisher_id,issue_status.staus
FROM librarysystem.book
RIGHT JOIN librarysystem.issue_status
ON book.book_id = issue_status.book_id;

```
SELECT book.title,book.publisher_id,issue_status.staus
FROM librarysystem.book
RIGHT JOIN librarysystem.issue_status
ON book.book_id = issue_status.book_id;
```

title	publisher_id	staus
Fallen	665	returned
Echo Foxtrot	2003	loaned
Nitrate	505	returned
Shawshank Redemption	500	extended tenure
The lost gem	800	returned
Radio-bots	909	not returned
VIP	836	returned
The Teacher	999	returned
Nazi and Hitler	603	returned
Quantam Mechanics	6660	returned

CREATE ROLE Owner;

```
mysql> CREATE ROLE Owner;
Query OK, 0 rows affected (0.01 sec)
```

GRANT ALL ON librarysystem.*
TO Owner;

```
mysql> GRANT ALL ON librarysystem.* TO Owner;
Query OK, 0 rows affected (0.01 sec)
```

GRANT Owner to 'Fashad'@'localhost';

```
mysql> GRANT Owner to 'Fashad'@'localhost';
Query OK, 0 rows affected (0.01 sec)
```

GROUP CLAUSE:

SELECT AVG(retail_price),MAX(retail_price),MIN(retail_price),MAX(retail_price)
FROM publisher;

```
mysql> SELECT AVG(retail_price),MAX(retail_price),MIN(retail_price),MAX(retail_price) FROM publisher;
+-------------------+-------------------+-------------------+-------------------+
| AVG(retail_price) | MAX(retail_price) | MIN(retail_price) | MAX(retail_price) |
+-------------------+-------------------+-------------------+-------------------+
|        7113.0769 |             30000 |               200 |             30000 |
+-------------------+-------------------+-------------------+-------------------+
1 row in set (0.00 sec)
```

SELECT COUNT(DISTINCT branch_id)
FROM book;

```
mysql> SELECT COUNT(DISTINCT branch_id) FROM book;
+----------------------------+
| COUNT(DISTINCT branch_id) |
+----------------------------+
|                          5 |
+----------------------------+
1 row in set (0.01 sec)
```

SELECT login_id,AVG(Password/2)
FROM authentication_system
GROUP BY login_id;

```
mysql> SELECT login_id,AVG(Password/2) FROM authentication_system GROUP BY login_id;
+----------+-----------------+
| login_id | AVG(Password/2) |
+----------+-----------------+
|        1 |              50 |
|        2 |             100 |
|        3 |             150 |
|        4 |             200 |
|        5 |             250 |
|        6 |             300 |
|        7 |             350 |
|        8 |             400 |
|        9 |             450 |
|       10 |             550 |
|       11 |             600 |
|       12 |             650 |
|       13 |             700 |
|       14 |             750 |
|       15 |             800 |
+----------+-----------------+
15 rows in set (0.00 sec)
```

SELECT book_issued,name,reg_date
FROM customer
GROUP BY customer_id,branch_id;

```
ysql> SELECT book_issued,name,reg_date FROM customer GROUP BY customer_id,branch_id;
+----------------------+---------+----------+
| book_issued          | name    | reg_date |
+----------------------+---------+----------+
| Fallen               | Ali     | 190121   |
| VIP                  | Ammar   | 200121   |
| The Teacher          | Azan    | 210121   |
| Echo Foxtrot         | Aleeza  | 220121   |
| Nitrate              | Armaan  | 230121   |
| Shawshank Redemption | Zunaira | 70621    |
| Nazi and Hitler      | Haseeb  | 200721   |
| Quantam Mechanics    | Maham   | 201021   |
| Duckly Inheritance   | Rafay   | 201021   |
| EMF And world        | Sami    | 201021   |
| Radio-bots           | Safeer  | 50721    |
| The lost gem         | Navira  | 50721    |
+----------------------+---------+----------+
```

SELECT book_issued,name,reg_date
FROM customer
GROUP BY customer_id,branch_id
HAVING MAX(customer_id)>5;

```
mysql> SELECT book_issued,name,reg_date FROM customer GROUP BY customer_id,branch_id HAVING MAX(customer_id)>5;
+----------------------+---------+----------+
| book_issued          | name    | reg_date |
+----------------------+---------+----------+
| Shawshank Redemption | Zunaira | 70621    |
| Nazi and Hitler      | Haseeb  | 200721   |
| Quantam Mechanics    | Maham   | 201021   |
| Duckly Inheritance   | Rafay   | 201021   |
| EMF And world        | Sami    | 201021   |
| Radio-bots           | Safeer  | 50721    |
| The lost gem         | Navira  | 50721    |
+----------------------+---------+----------+
7 rows in set (0.00 sec)
```

VIEWS CLAUSE:

CREATE VIEW new_Staff_264
AS
SELECT book_issued,name,address,reg_date
FROM customer

WHERE branch_id=264;

```
mysql> CREATE VIEW new_Staff_264 AS SELECT book_issued,name,address,reg_date FROM customer WHERE branch_id=264;
Query OK, 0 rows affected (0.03 sec)

mysql> SELECT * FROM new_Staff_264;
+-------------+------+---------------+----------+
| book_issued | name | address       | reg_date |
+-------------+------+---------------+----------+
| Fallen      | Ali  | BLOCK-1,A-SITE | 190121   |
+-------------+------+---------------+----------+
1 row in set (0.01 sec)
```

CREATE VIEW Staff_view
AS
SELECT name,book_issued,address
FROM customer;

```
mysql> CREATE VIEW Staff_view AS SELECT name,book_issued,address FROM customer;
Query OK, 0 rows affected (0.01 sec)

mysql> SELECT * FROM Staff_view;
+---------+----------------------+--------------------+
| name    | book_issued          | address            |
+---------+----------------------+--------------------+
| Ali     | Fallen               | BLOCK-1,A-SITE     |
| Ammar   | VIP                  | BLOCK-2,A-SITE     |
| Azan    | The Teacher          | BLOCK-3,A-SITE     |
| Aleeza  | Echo Foxtrot         | BLOCK-4,A-SITE     |
| Armaan  | Nitrate              | BLOCK-5,A-SITE     |
| Zunaira | Shawshank Redemption | P.E.C.H.S BLOCK 2  |
| Haseeb  | Nazi and Hitler      | P.E.C.H.S BLOCK6   |
| Maham   | Quantam Mechanics    | Newtown Subway     |
| Rafay   | Duckly Inheritance   | Maskan Street 94-A |
| Sami    | EMF And world        | Nazimabad Block 1  |
| Safeer  | Radio-bots           | BLOCK-9,A-SITE     |
| Navira  | The lost gem         | BLOCK-9,A-SITE     |
+---------+----------------------+--------------------+
12 rows in set (0.01 sec)
```

```
CREATE VIEW Books_information_Customers
AS
SELECT a.author_name,a.title,b.branch_id,b.publisher_id
FROM author a,book b
WHERE a.title = b.title;
```

```
mysql> CREATE VIEW Books_information_Customers AS SELECT a.author_name,a.title,b.branch_id,b.publisher_id FROM author a,book b WHERE a.title = b.title;
Query OK, 0 rows affected (0.04 sec)

mysql> SELECT * FROM Books_information_Customers;
+-------------------+-----------------------------+-----------+--------------+
| author_name       | title                       | branch_id | publisher_id |
+-------------------+-----------------------------+-----------+--------------+
| Hasan Ashfaq      | Fallen                      |       264 |          665 |
| Thiery Henry      | Echo Foxtrot                |       267 |         2003 |
| Kevin Phillips    | Nitrate                     |       268 |          505 |
| Camy Kin          | Shawshank Redemption        |       267 |          500 |
| Van Buyten        | The lost gem                |       266 |          800 |
| Madem Curie       | Radio-bots                  |       266 |          909 |
| Jeff Bezoz        | VIP                         |       265 |          836 |
| Elon Musk         | The Teacher                 |       266 |          999 |
| Ahmed Mustaqeem   | Duckly Inheritance          |       268 |        10003 |
| Robin Scpahnzk    | Nazi and Hitler             |       265 |          603 |
| Jack Wandepilasch | Quantam Mechanics           |       266 |         6660 |
| Dwayne Van Diesel | Family                      |       269 |          999 |
| Robert Snjider    | Harry Potter and Golden Globe |       270 |           40 |
| Robin Scpahnzky   | Nazi Hitler                 |       271 |          210 |
| Bushra Khan       | Road to Independent State   |       271 |          700 |
+-------------------+-----------------------------+-----------+--------------+
15 rows in set (0.01 sec)
```

```
CREATE VIEW branch_employees_overview
AS
SELECT s.name,s.login_id,s.branch_id,b.Address
FROM branch b,staff s
WHERE b.branch_id = s.branch_id;
```

```
mysql> CREATE VIEW branch_employees_overview AS SELECT s.name,s.login_id,s.branch_id,b.Address FROM branch b,staff s WHERE b.branch_id = s.branch_id;
Query OK, 0 rows affected (0.02 sec)

mysql> SELECT * FROM branch_employees_overview;
+----------+----------+-----------+-----------------+
| name     | login_id | branch_id | Address         |
+----------+----------+-----------+-----------------+
| Burki    |        1 |       264 | BLOCK-15,A-SITE |
| Boose    |        2 |       265 | BLOCK-16,B-SITE |
| Burhan   |        3 |       266 | BLOCK-17,C-SITE |
| Tassaduq |        4 |       267 | BLOCK-18,D-SITE |
| Burkan   |        5 |       268 | BLOCK-19,E-SITE |
| Rohail   |        6 |       267 | BLOCK-18,D-SITE |
| Zargham  |        7 |       265 | BLOCK-16,B-SITE |
| Fareha   |        8 |       266 | BLOCK-17,C-SITE |
| Kashif   |        9 |       268 | BLOCK-19,E-SITE |
| Larosh   |       10 |       268 | BLOCK-19,E-SITE |
| Saleha   |       11 |       269 | BLOCK-20,F-SITE |
| Jonas    |       12 |       270 | BLOCK-20,G-SITE |
| Malik    |       13 |       271 | BLOCK-22,G-SITE |
+----------+----------+-----------+-----------------+
13 rows in set (0.00 sec)
```