# MySQL Database Assignments

## KASHVI PATEL 775 SQL ASSIGNMENT

August 27, 2025

## 1 PROBLEM1: ONLINE BOOKSTORE MANAGE-MENT

#### **SOLUTION**

```
CREATE TABLE BOOK ( BOOK_ID INT PRIMARY KEY, TITLE
VARCHAR(100), AUTHOR VARCHAR(50), PRICE DECIMAL(6,2));
CREATE TABLE CUSTOMER( CUSTOMER_ID INT PRIMARY KEY, NAME
VARCHAR(50), CITY VARCHAR(50));
CREATE TABLE ORDERTABLE (ORDER_ID INT PRIMARY KEY,
ORDER_DATE DATE, CUSTOMER_ID INT, FOREIGN KEY (CUSTOMER_ID)
REFERENCES CUSTOMER(CUSTOMER_ID));
CREATE TABLE ORDERDETAILS( DETAIL_ID INT PRIMARY KEY,
ORDER_ID INT, BOOK_ID INT, QUANTITY INT, FOREIGN KEY
(ORDER_ID) REFERENCES ORDERTABLE(ORDER_ID), FOREIGN KEY
(BOOK_ID) REFERENCES BOOK(BOOK_ID));
INSERT INTO BOOK VALUES (1, 'MASTERING DATABASES', 'PRIYA
NAIR', 310.00);
INSERT INTO BOOK VALUES (2, 'PYTHON FOR ALL', 'RAGHAV
MENON', 180.00);
INSERT INTO BOOK VALUES (3, 'CLOUD COMPUTING BASICS', 'MEERA JOSHI', 295.00)
INSERT INTO BOOK VALUES (4, 'BUSINESS ANALYTICS 101', 'ALOK SHARMA', 150.00)
INSERT INTO BOOK VALUES (5, 'JAVA EXPLAINED', 'CHETAN BHAGAT', 450.00);
INSERT INTO BOOK VALUES (6, 'MODERN AI TRENDS', 'UNKOWN', 210.00);
INSERT INTO CUSTOMER VALUES (101, 'RAVI KUMAR', 'DELHI');
INSERT INTO CUSTOMER VALUES (102, 'ANJALI VERMA', 'AGRA');
INSERT INTO CUSTOMER VALUES (103, 'DEVANSH MEHTA', 'AMRITSAR');
INSERT INTO CUSTOMER VALUES (104, 'SIMRAN KAPOOR', 'BHOPAL');
INSERT INTO CUSTOMER VALUES (105, 'ARYAN JOSHI', 'AHMEDABAD');
INSERT INTO ORDERTABLE VALUES (1001, '2025-08-10', 101);
INSERT INTO ORDERTABLE VALUES (1002, '2025-08-12', 102);
INSERT INTO ORDERTABLE VALUES (1003, '2025-08-14', 104);
INSERT INTO ORDERTABLE VALUES (1004, '2025-08-15', 105);
INSERT INTO ORDERDETAILS VALUES (1, 1001, 2, 1);
INSERT INTO ORDERDETAILS VALUES (2, 1001, 4, 3);
INSERT INTO ORDERDETAILS VALUES (3, 1002, 1, 2);
```

```
INSERT INTO ORDERDETAILS VALUES (4, 1003, 5, 1);
INSERT INTO ORDERDETAILS VALUES (5, 1004, 3, 2);
INSERT INTO ORDERDETAILS VALUES (6, 1004, 6, 1);
UPDATE BOOK SET PRICE = PRICE*1.15 WHERE PRICE < 200;
DELETE FROM BOOK WHERE AUTHOR ='UNKNOWN';
SELECT * FROM CUSTOMER WHERE CITY LIKE 'A%';
SELECT * FROM BOOK WHERE TITLE LIKE '%GUIDE%';
UPDATE CUSTOMER SET CITY = 'HYDERABAD' WHERE NAME ='RAVI KUMAR';
SELECT * FROM BOOK WHERE PRICE BETWEEN 300 AND 500;
ALTER TABLE BOOK ADD STOCK_QUANTITY INT;
UPDATE BOOK SET STOCK_QUANTITY = 50 WHERE AUTHOR ='CHETAN BHAGAT';
```

#### SOLUTION OUTPUT

```
MySQL 8.0 Command Line Cli 💢
mysql> DELETE FROM BOOK WHERE AUTHOR ='UNKNOWN';
Query OK, 0 rows affected (0.03 sec)
mysql> SELECT * FROM CUSTOMER WHERE CITY LIKE 'A%';
 CUSTOMER ID | NAME
                                 CITY
          102
                ANJALI VERMA
                                 AGRA
          103
                DEVANSH MEHTA
                                 AMRITSAR
          105 l
                ARYAN JOSHI
                                 AHMEDABAD
3 rows in set (0.02 sec)
mysql> SELECT * FROM BOOK WHERE TITLE LIKE '%GUIDE%';
Empty set (0.00 sec)
mysql> UPDATE CUSTOMER SET CITY = 'HYDERABAD' WHERE NAME ='RAVI KUMAR';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> SELECT * FROM CUSTOMER;
| CUSTOMER_ID | NAME
                                 CITY
          101
                RAVI KUMAR
                                 HYDERABAD
          102
                ANJALI VERMA
                                 AGRA
          103
                DEVANSH MEHTA
                                 AMRITSAR
                SIMRAN KAPOOR
                                 BHOPAL
          104
                ARYAN JOSHI
          105
                                 AHMEDABAD
5 rows in set (0.00 sec)
mysql> SELECT * FROM BOOK WHERE PRICE BETWEEN 300 AND 500;
| BOOK_ID | TITLE
                                   AUTHOR
                                                   PRICE
            MASTERING DATABASES |
                                   PRIYA NAIR
                                                    310.00
        1 l
        5
            JAVA EXPLAINED
                                   CHETAN BHAGAT
                                                    450.00
2 rows in set (0.00 sec)
mysql> ALTER TABLE BOOK ADD STOCK_QUANTITY INT;
Query OK, 0 rows affected (0.05 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> UPDATE BOOK SET STOCK_QUANTITY = 50 WHERE AUTHOR ='CHETAN BHAGAT';
Query OK, 1 row affected (0.05 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

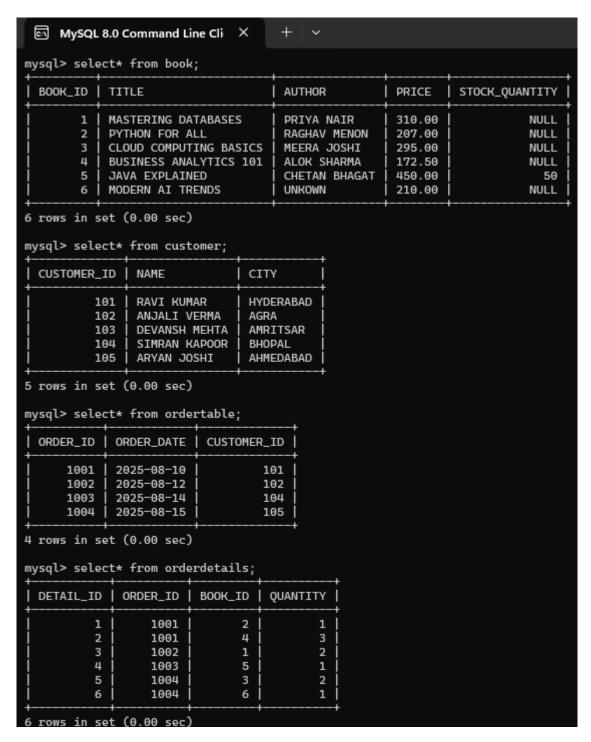


Figure 1: output for problem 1

### 2 PROBLEM2: FITNESS CENTER MEMBERSHIP

### sql queries

```
CREATE TABLE MEMBER( MEMBER_ID INT PRIMARY KEY, NAME
VARCHAR(50), JOIN_DATE DATE, CITY VARCHAR(50));
CREATE TABLE TRAINER( TRAINER_ID INT PRIMARY KEY, NAME
VARCHAR(50), SPECIALIZATION VARCHAR(50));
CREATE TABLE CLASS( CLASS_ID INT PRIMARY KEY, CLASS_NAME
VARCHAR(50), TRAINER_ID INT, FOREIGN KEY (TRAINER_ID)
REFERENCES TRAINER (TRAINER_ID));
CREATE TABLE MEMBERSHIP ( MEMBERSHIP_ID INT PRIMARY KEY,
MEMBER_ID INT, CLASS_ID INT, START_DATE DATE, END_DATE
DATE, FOREIGN KEY (MEMBER_ID) REFERENCES MEMBER
(MEMBER_ID), FOREIGN KEY(CLASS_ID) REFERENCES
CLASS(CLASS_ID));
INSERT INTO MEMBER VALUES(1, 'ANJALI SHARMA', '2024-03-12', 'DELHI');
INSERT INTO MEMBER VALUES(2, 'ROHAN VERMA', '2024-05-20', 'AHMEDABAD');
INSERT INTO MEMBER VALUES(3, 'SNEHA KAPOOR', '2024-11-10', 'JAIPUR');
INSERT INTO MEMBER VALUES(4, 'ARYAN MEHTA', '2024-02-14', 'MUMBAI');
INSERT INTO MEMBER VALUES(5, 'PRIYA NAIR', '2024-06-08', 'KOLKATA');
INSERT INTO MEMBER VALUES(6, 'MANAV GUPTA', '2024-12-30', 'UNKNOWN');
INSERT INTO TRAINER VALUES(1, 'SIDDHARTH SINGH', 'CARDIO');
INSERT INTO TRAINER VALUES(2, 'NEHA PATIL', 'STRENGTH');
INSERT INTO TRAINER VALUES(3, 'SURESH IYER', 'CROSSFIT');
INSERT INTO CLASS VALUES (101, 'MORNING YOGA', 1);
INSERT INTO CLASS VALUES (102, 'POWER PILATES', 2);
INSERT INTO CLASS VALUES (103, 'HIIT BLAST', 3);
INSERT INTO CLASS VALUES (104, 'EVENING YOGA FLOW', 1);
INSERT INTO MEMBERSHIP VALUES (201, 1, 101, '2024-03-15', '2024-06-15');
INSERT INTO MEMBERSHIP VALUES (202, 2, 103, '2024-05-25', '2024-08-25');
INSERT INTO MEMBERSHIP VALUES (203, 3, 104, '2023-11-12', '2024-02-12');
INSERT INTO MEMBERSHIP VALUES (204, 4, 102, '2024-02-20', '2024-05-20');
INSERT INTO MEMBERSHIP VALUES (205, 5, 101, '2024-06-10', '2024-09-10');
UPDATE TRAINER SET SPECIALIZATION = 'GENEREAL FITNESS' WHERE NAME LIKE 'S%';
DELETE FROM MEMBER WHERE CITY = 'UNKNOWN';
SELECT*FROM MEMBER WHERE JOIN_DATE > '2024-01-01';
ALTER TABLE CLASS ADD MONTHLY_FEE DECIMAL(7,2);
UPDATE CLASS SET MONTHLY_FEE = 2000 WHERE CLASS_NAME LIKE '%PILATES%';
SELECT * FROM TRAINER WHERE LENGTH(SPECIALIZATION) = 10;
```

#### SOLUTION OUTPUT



Figure 2: output for problem 2

### 3 PROBLEM3: MOVIE RENTAL STORE

## sql queries

```
CREATE TABLE MOVIE ( MOVIE_ID INT PRIMARY KEY, TITLE
VARCHAR(100), GENRE VARCHAR(30), RELEASE_YEAR INT);
CREATE TABLE CUSTOMER ( CUSTOMER_ID INT PRIMARY KEY, NAME
VARCHAR(50), PHONE VARCHAR(15));
CREATE TABLE RENTAL ( RENTAL_ID INT PRIMARY KEY,
RENTAL_DATE DATE, CUSTOMER_ID INT, FOREIGN KEY
 (CUSTOMER ID) REFERENCES CUSTOMER(CUSTOMER ID)):
CREATE TABLE RENTALDETAILS ( RENTAL_DETAIL_ID INT PRIMARY
KEY, RENTAL_ID INT, MOVIE_ID INT, RETURN_DATE DATE, FOREIGN
KEY (RENTAL_ID) REFERENCES RENTAL (RENTAL_ID), FOREIGN KEY
 (MOVIE_ID) REFERENCES MOVIE(MOVIE_ID));
INSERT INTO MOVIE VALUES (1, 'THE LOST TREASURE', 'ADVENTURE', 1998);
INSERT INTO MOVIE VALUES (2, 'SKYLINE HEIGHTS', 'ACTION', 2015);
INSERT INTO MOVIE VALUES (3, 'LAUGH OUT LOUD', 'COMEDY', 2018);
INSERT INTO MOVIE VALUES (4, 'DEEP BLUE SEA', 'THRILLER', 2005);
INSERT INTO MOVIE VALUES (5, 'CITY LIGHTS', 'DRAMA', 2012);
INSERT INTO MOVIE VALUES (6, 'FAST STRIKE', 'ACTION', 2019);
INSERT INTO CUSTOMER VALUES (101, 'RAHUL VERMA', '9893925867');
INSERT INTO CUSTOMER VALUES (102, 'PRIYA DESAI', '9893925377');
INSERT INTO CUSTOMER VALUES (103, 'KARAN PATEL', '9893922177');
INSERT INTO CUSTOMER VALUES (104, 'MAYA IYER', '9343922177');
INSERT INTO RENTAL VALUES (201, '2024-02-01', 101);
INSERT INTO RENTAL VALUES (202, '2024-02-05', 102);
INSERT INTO RENTAL VALUES (203, '2024-02-10', 103);
INSERT INTO RENTAL VALUES (204, '2024-02-12', 101);
INSERT INTO RENTAL VALUES (205, '2024-03-15', 104);
INSERT INTO RENTALDETAILS VALUES (301, 201, 2, '2024-02-10');
INSERT INTO RENTALDETAILS VALUES (302, 202, 3, '2024-02-15');
INSERT INTO RENTALDETAILS VALUES (303, 203, 1, '2024-03-20');
INSERT INTO RENTALDETAILS VALUES (304, 204, 4, '2024-03-18');
INSERT INTO RENTALDETAILS VALUES (305, 205, 5, '2024-03-25');
UPDATE MOVIE SET GENRE = 'CLASSIC' WHERE RELEASE_YEAR <2000;
DELETE FROM MOVIE WHERE TITLE LIKE '%TEST%';
SELECT * FROM CUSTOMER WHERE NAME LIKE '%PATEL';
SELECT * FROM MOVIE WHERE RELEASE_YEAR BETWEEN 2010 AND 2020;
UPDATE CUSTOMER SET PHONE = '999999999' WHERE NAME = 'RAHUL VERMA':
SELECT * FROM MOVIE WHERE GENRE LIKE '%ACTION%';
ALTER TABLE MOVIE ADD RENTAL_PRICE DECIMAL(6,2);
UPDATE MOVIE SET RENTAL_PRICE = 150 WHERE GENRE = 'COMEDY';
```

#### SOLUTION OUTPUT

```
MySQL 8.0 Command Line Cli X
mysql> INSERT INTO RENTALDETAILS VALUES (304, 204, 4, '2024-03-18');
Query OK, 1 row affected (0.05 sec)
mysql> INSERT INTO RENTALDETAILS VALUES (305, 205, 5, '2024-03-25');
Query OK, 1 row affected (0.02 sec)
mysql> UPDATE MOVIE SET GENRE = 'CLASSIC' WHERE RELEASE_YEAR <2000;
Query OK, 1 row affected (0.03 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> DELETE FROM MOVIE WHERE TITLE LIKE '%TEST%';
Query OK, 0 rows affected (0.00 sec)
mysql> SELECT * FROM CUSTOMER WHERE NAME LIKE '%PATEL';
| CUSTOMER_ID | NAME
                             | PHONE
          103 | KARAN PATEL | 9893922177 |
1 row in set (0.00 sec)
mysql> SELECT * FROM MOVIE WHERE RELEASE_YEAR BETWEEN 2010 AND 2020;
 MOVIE_ID | TITLE
                              GENRE
                                       | RELEASE_YEAR |
         2 | SKYLINE HEIGHTS | ACTION
3 | LAUGH OUT LOUD | COMEDY
                                                 2015
             LAUGH OUT LOUD
                                                 2018
           | CITY LIGHTS
         5
                               DRAMA
                                                 2012
         6 | FAST STRIKE
                               ACTION |
                                                 2019
4 rows in set (0.00 sec)
```

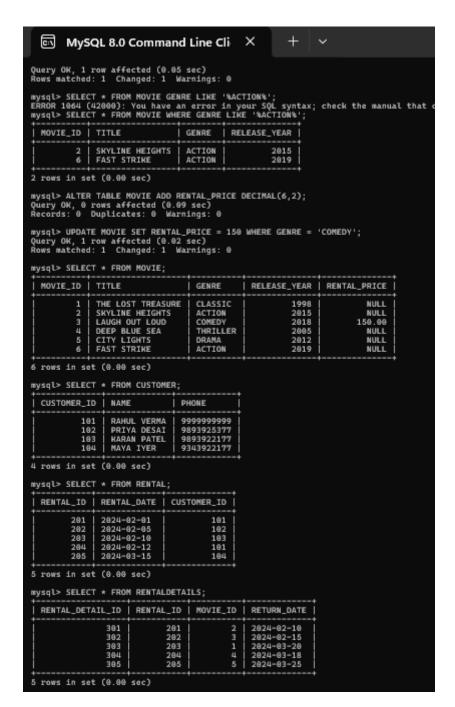


Figure 3: output for problem 2