

SQL ASSIGNMENT 1

FULL QUERY:

```
CREATE DATABASE BooksDB;
```

```
USE BooksDB;
```

```
CREATE TABLE Books(
```

```
title VARCHAR(20),
```

```
author VARCHAR(20),
```

```
genre VARCHAR(10),
```

```
pyear INT,
```

```
price INT
```

```
);
```

```
DESCRIBE Books;
```

```
INSERT INTO Books VALUES("Life of Pi","Yann Martel","Adventure",2001,2456);
```

```
INSERT INTO Books VALUES("Bird Box","Josh Malerman","Horror",2015,2126);
```

```
INSERT INTO Books VALUES("The Night Fire","Michael Connelly","Mystery",2019,2476);
```

```
INSERT INTO Books VALUES("Dare Devil","Stan Lee","Comic",1964,700);
```

```
INSERT INTO Books VALUES("The Water Dancer","Ta-Nehisi Coates","Fantasy",2018,1018);
```

```
SELECT * FROM Books;
```

```
SELECT * FROM Books WHERE title="The Night Fire";
```

```
UPDATE Books SET price=2750 WHERE title="Life of Pi";
```

```
DELETE FROM Books WHERE title="Dare Devil";
```

Four types of Operations

There are four types of operations are used in MySql.

They are:

- 1) Create
- 2) Read
- 3) Update
- 4) Delete

In one table we can using all these four operations.

Questions:

Create a database named "BooksDB" to store information about the bookstore's collection of books.

Design a table called "Books" to store the details of each book, including the book's title, author, genre, publication year, and price.

Insert at least five books into the "Books" table, ensuring that each book has unique information for all columns.

A).Retrieve all the books from the database.

B).Retrieve the details of a book based on its title:

C) Update the price of a book.

D).Delete a book from the database based on its title:

OUTPUTS:

SCREENSHOTS:

Describe Books:

In this area we describe our table.

Query:

DESCRIBE Books;

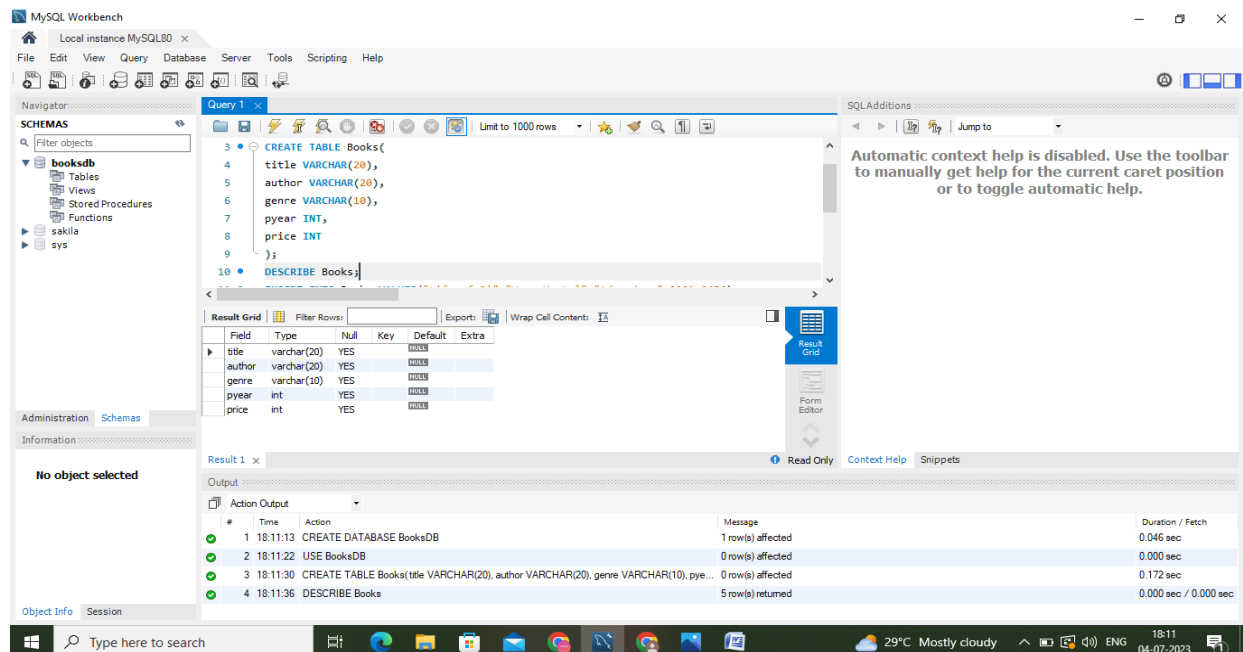
INSERT INTO Books VALUES("Life of Pi","Yann Martel","Adventure",2001,2456);

INSERT INTO Books VALUES("Bird Box","Josh Malerman","Horror",2015,2126);

INSERT INTO Books VALUES("The Night Fire","Michael Connelly","Mystry",2019,2476);

INSERT INTO Books VALUES("Dare Devil","Stan Lee","Comic",1964,700);

INSERT INTO Books VALUES("The Water Dancer","Ta-Nehisi Coats","Fantasy",2018,1018);



The screenshot displays the MySQL Workbench interface. The central query editor shows the following SQL code:

```
3 CREATE TABLE Books(  
4 title VARCHAR(20),  
5 author VARCHAR(20),  
6 genre VARCHAR(10),  
7 pyear INT,  
8 price INT  
9 );  
10 DESCRIBE Books;
```

The 'Result Grid' pane below the query editor shows the structure of the 'Books' table:

Field	Type	Null	Key	Default	Extra
title	varchar(20)	YES			
author	varchar(20)	YES			
genre	varchar(10)	YES			
pyear	int	YES			
price	int	YES			

The bottom 'Output' pane shows the execution log for the query:

#	Time	Action	Message	Duration / Fetch
1	18:11:13	CREATE DATABASE BooksDB	1 row(s) affected	0.046 sec
2	18:11:22	USE BooksDB	0 row(s) affected	0.000 sec
3	18:11:30	CREATE TABLE Books(title VARCHAR(20), author VARCHAR(20), genre VARCHAR(10), pyear INT, price INT)	0 row(s) affected	0.172 sec
4	18:11:36	DESCRIBE Books	5 row(s) returned	0.000 sec / 0.000 sec

A).Retrieve all the books from the database.

Our table was created. All the books from the database can be retrieved.

Query:

```
SELECT * FROM Books;
```

title	author	genre	pyear	price
Life of Pi	Yann Martel	Adventure	2001	2456
Bird Box	Josh Malerman	Horror	2015	2126
The Night Fire	Michael Connelly	Mystery	2019	2476
Dare Devil	Stan Lee	Comic	1964	700
The Water Dancer	Ta-Nehisi Coates	Fantasy	2018	1018

The screenshot displays the MySQL Workbench interface. The 'Query Editor' window shows a SQL script with the following queries:

```
10 • DESCRIBE Books;
11 • INSERT INTO Books VALUES("Life of Pi","Yann Martel","Adventure",2001,2456);
12 • INSERT INTO Books VALUES("Bird Box","Josh Malerman","Horror",2015,2126);
13 • INSERT INTO Books VALUES("The Night Fire","Michael Connelly","Mystery",2019,2476);
14 • INSERT INTO Books VALUES("Dare Devil","Stan Lee","Comic",1964,700);
15 • INSERT INTO Books VALUES("The Water Dancer","Ta-Nehisi Coates","Fantasy",2018,1018);
16
17 • SELECT * FROM Books;
```

The 'Result Grid' window shows the output of the SELECT query, displaying a table with 5 columns: title, author, genre, pyear, and price. The data rows are:

Life of Pi	Yann Martel	Adventure	2001	2456
Bird Box	Josh Malerman	Horror	2015	2126
The Night Fire	Michael Connelly	Mystery	2019	2476
Dare Devil	Stan Lee	Comic	1964	700
The Water Dancer	Ta-Nehisi Coates	Fantasy	2018	1018

The 'Output' window shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
7	18:12:23	INSERT INTO Books VALUES("The Night Fire","Michael Connelly","Mystery",2019,2476)	1 row(s) affected	0.110 sec
8	18:12:28	INSERT INTO Books VALUES("Dare Devil","Stan Lee","Comic",1964,700)	1 row(s) affected	0.094 sec
9	18:12:32	INSERT INTO Books VALUES("The Water Dancer","Ta-Nehisi Coates","Fantasy",2018,1018)	1 row(s) affected	0.125 sec
10	18:12:37	SELECT * FROM Books LIMIT 0.1000	5 row(s) returned	0.016 sec / 0.000 sec

B).Retrieve the details of a book based on its title:

Using the title name we can retrieve the particular row from the database.

Query:

```
SELECT * FROM Books WHERE title="The Night Fire";
```

title	author	genre	pyear	price
The Night Fire	Michael Connelly	Mystry	2019	2476

The screenshot displays the MySQL Workbench interface. The 'Query' tab is active, showing a SQL script with several statements. The 'Result Grid' is visible below the query, displaying the results of the query: 'SELECT * FROM Books WHERE title="The Night Fire";'. The results show one row with the following details: title: The Night Fire, author: Michael Connelly, genre: Mystry, pyear: 2019, price: 2476.

The 'Output' tab is also visible, showing the execution log. The log indicates that the query was executed successfully, returning 1 row(s) in 0.031 sec.

The 'Navigator' pane on the left shows the database structure, including the 'booksdb' database and its tables, views, stored procedures, and functions. The 'sakila' and 'sys' databases are also listed.

The 'Administration' and 'Schemas' tabs are visible at the bottom of the interface.

C) Update the price of a book.

In this question we use the Update method. Using update method we can update any values in the table.

This question we change the book price from the books table.

Query:

```
UPDATE Books SET price=2750 WHERE title="Life of Pi";
```

title	author	genre	pyear	price
Life of Pi	Yann Martel	Adventure	2001	2750
Bird Box	Josh Malerman	Horror	2015	2126
The Night Fire	Michael Connelly	Mystery	2019	2476
Dare Devil	Stan Lee	Comic	1964	700
The Water Dancer	Ta-Nehisi Coates	Fantasy	2018	1018

The screenshot displays the MySQL Workbench interface. The 'Query Editor' window shows a series of SQL commands: a DESCRIBE statement for the 'books' table, followed by five INSERT INTO statements for books with titles 'Bird Box', 'The Night Fire', 'Dare Devil', and 'The Water Dancer'. The final command is a SELECT * FROM Books; query. The 'Result Grid' window shows the output of the SELECT query, displaying a table with columns title, author, genre, pyear, and price, containing five rows of book data. The 'Output' window shows the execution log, indicating that the UPDATE statement successfully affected 1 row (Life of Pi) and changed its price to 2750. The 'SQL Additions' panel on the right provides context help for the current caret position.

title	author	genre	pyear	price
Life of Pi	Yann Martel	Adventure	2001	2750
Bird Box	Josh Malerman	Horror	2015	2126
The Night Fire	Michael Connelly	Mystery	2019	2476
Dare Devil	Stan Lee	Comic	1964	700
The Water Dancer	Ta-Nehisi Coates	Fantasy	2018	1018

#	Time	Action	Message	Duration / Fetch
10	18:12:37	SELECT * FROM Books LIMIT 0, 1000	5 row(s) returned	0.016 sec / 0.000 sec
11	18:12:56	SELECT * FROM Books WHERE title="The Night Fire" LIMIT 0, 1000	1 row(s) returned	0.031 sec / 0.000 sec
12	18:13:23	UPDATE Books SET price=2750 WHERE title="Life of Pi"	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.109 sec
13	18:13:47	SELECT * FROM Books LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

D).Delete a book from the database based on its title:

In this question we use delete method. Using delete method we can delete a any particular row.

Query:

DELETE FROM Books WHERE title="Dare Devil";

title	author	genre	pyear	price
Life of Pi	Yann Martel	Adventure	2001	2750
Bird Box	Josh Malerman	Horror	2015	2126
The Night Fire	Michael Connelly	Mystery	2019	2476
The Water Dancer	Ta-Nehisi Coates	Fantasy	2018	1018

The screenshot displays the MySQL Workbench interface. The 'Query' tab is active, showing a SQL script with the following queries:

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16
17 • SELECT * FROM Books;
```

The 'Result Grid' shows the output of the SELECT query, displaying a table with 5 columns: title, author, genre, pyear, and price. The data rows are:

Life of Pi	Yann Martel	Adventure	2001	2750
Bird Box	Josh Malerman	Horror	2015	2126
The Night Fire	Michael Connelly	Mystery	2019	2476
The Water Dancer	Ta-Nehisi Coates	Fantasy	2018	1018

The 'Action Output' tab at the bottom shows the execution log:

#	Time	Action	Message	Duration / Fetch
12	18:13:23	UPDATE Books SET price=2750 WHERE title="Life of Pi"	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.109 sec
13	18:13:47	SELECT * FROM Books LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
14	18:13:59	DELETE FROM Books WHERE title="Dare Devil"	1 row(s) affected	0.109 sec
15	18:14:09	SELECT * FROM Books LIMIT 0, 1000	4 row(s) returned	0.015 sec / 0.000 sec

Final Output:

Final output for the question.

The screenshot displays the MySQL Workbench interface for a local instance of MySQL 8.0. The left sidebar shows the 'SCHEMAS' tree with 'booksdb' selected. The main window shows the 'Query 1' editor with a series of SQL commands. The 'Output' pane at the bottom shows the execution results of these commands.

SQL Commands:

```
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12 • INSERT INTO Books VALUES("Bird Box","Josh Malerman","Horror",2015,2126);  
13 • INSERT INTO Books VALUES("The Night Fire","Michael Connelly","Mystery",2019,2476);  
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```

Execution Results:

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5	18:12:12	INSERT INTO Books VALUES("Life of Pi","Yann Martel","Adventure",2001,2456)	1 row(s) affected	0.125 sec
6	18:12:19	INSERT INTO Books VALUES("Bird Box","Josh Malerman","Horror",2015,2126)	1 row(s) affected	0.110 sec
7	18:12:23	INSERT INTO Books VALUES("The Night Fire","Michael Connelly","Mystery",2019,2476)	1 row(s) affected	0.110 sec
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