

Kolej PERMATA@Pintar Negara, Universiti Kebangsaan Malaysia Digital Innovator Programme (D.I.P.) Semester 2 Part 2 2024/2025

Computer Science Foundation 1 Task 3: SQL Exercise - Library Database (10%)

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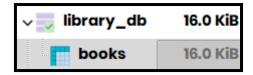
HEIDISQL Query Commands:

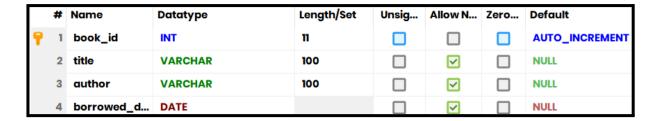
1. Creating databases and table

Command:

```
CREATE DATABASE library_db;
USE library_db;

CREATE TABLE books (
book_id INT PRIMARY KEY AUTO_INCREMENT,
title VARCHAR (100),
author VARCHAR (100),
borrowed_date DATE
):
```





2. Adding data to table

Command:

```
INSERT INTO books (title, author, borrowed_date)
VALUES
('Harry Potter', 'JK Rowling', '2024-06-26'),
('Lord Of The Rings', 'JRR Tolkien', '2024-07-29'),
('Atomic Habits', 'James Clear', '2024-10-16'),
('Goosebumps', 'RL Stine', '2024-07-1'),
('The 5AM Club', 'Robin Sharma', '2024-12-04');
```

library_db.books: 5 rows total (exact)				
#	book_id 🥊	title	author	borrowed_date
1	1	Harry Potter	JK Rowling	2024-06-26
2	2	Lord Of The Rings	JRR Tolkien	2024-07-29
3	3	Atomic Habits	James Clear	2024-10-16
4	4	Goosebumps	RL Stine	2024-07-01
5	5	The 5AM Club	Robin Sharma	2024-12-04

- 3. Selecting certain data
- a) Listing all books

Command:

```
SELECT * FROM books;
```

Results:

```
SELECT * FROM books;
/* */
/* Affected rows: 0 Found rows: 4 Warnings: 0 Duration for 1 query: 0.000 sec. */
```

b) Finding books by certain author

Command:

```
SELECT * FROM books
WHERE author = 'James Clear'
```

Results:

```
SELECT * FROM books WHERE author = 'James Clear'
/* */
/* Affected rows: 0 Found rows: 1 Warnings: 0 Duration for 1 query: 0.000 sec. */
```

c) Finding books published on a certain date

Command:

```
SELECT * FROM books
WHERE borrowed_date = '2024-06-26'
```

```
SELECT * FROM books WHERE borrowed_date = '2024-06-26' ;
/* */
/* Affected rows: 0 Found rows: 1 Warnings: 0 Duration for 1 query: 0.000 sec. */
```

d) Finding books published after a certain date

Command:

```
SELECT * FROM books
WHERE borrowed_date > '2024-07-02'
```

```
SELECT * FROM books WHERE borrowed_date > '2024-07-02';

/* */

/* Affected rows: 0 Found rows: 3 Warnings: 0 Duration for 1 query: 0.000 sec. */
```

4. Updating data in tables

a) Updating borrowed_date

Before command:

book_id	title	author	borrowed_date
	1 Harry Potter	JK Rowling	2024-06-26

Command:

```
USE library_db;
UPDATE books
SET borrowed_date = '2024-09-11'
WHERE book_id = 1;
```

Results:



b) Deleting a book

Before command:



Command:

```
USE library_db;
DELETE FROM books
WHERE book_id = 1;
```

Results:

book_id 💡	title	author	borrowed_date
2	Lord Of The Rings	JRR Tolkien	2024-07-29
3	Atomic Habits	James Clear	2024-10-16
4	Goosebumps	RL Stine	2024-07-01
5	The 5AM Club	Robin Sharma	2024-12-04

c) Re-adding a deleted book

Before command:

book_id 💡	title	author	borrowed_date
2	Lord Of The Rings	JRR Tolkien	2024-07-29
3	Atomic Habits	James Clear	2024-10-16
4	Goosebumps	RL Stine	2024-07-01
5	The 5AM Club	Robin Sharma	2024-12-04

Command:

```
INSERT INTO books (title, author, borrowed_date)
VALUES ('Harry Potter', 'JK Rowling', '2024-06-26')
```

