

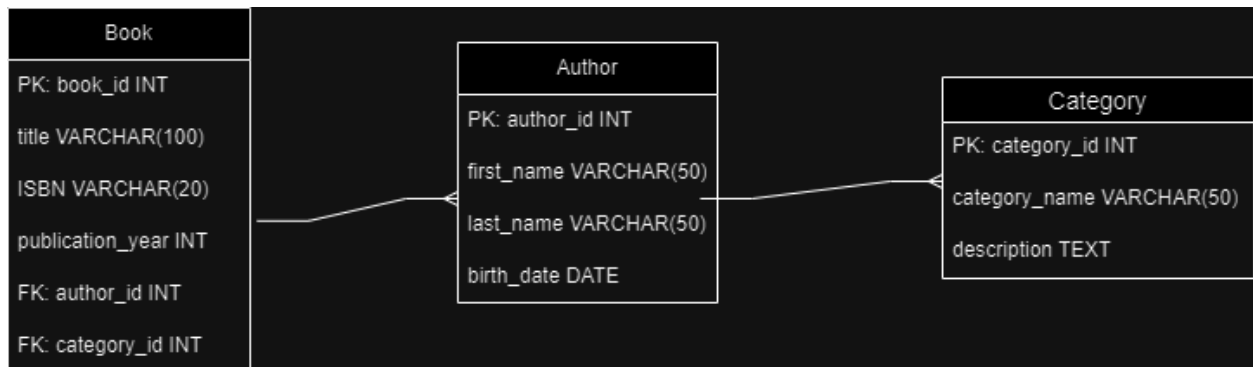
Exercise

Name: Saeed Mohammed Saeed Alqahtani

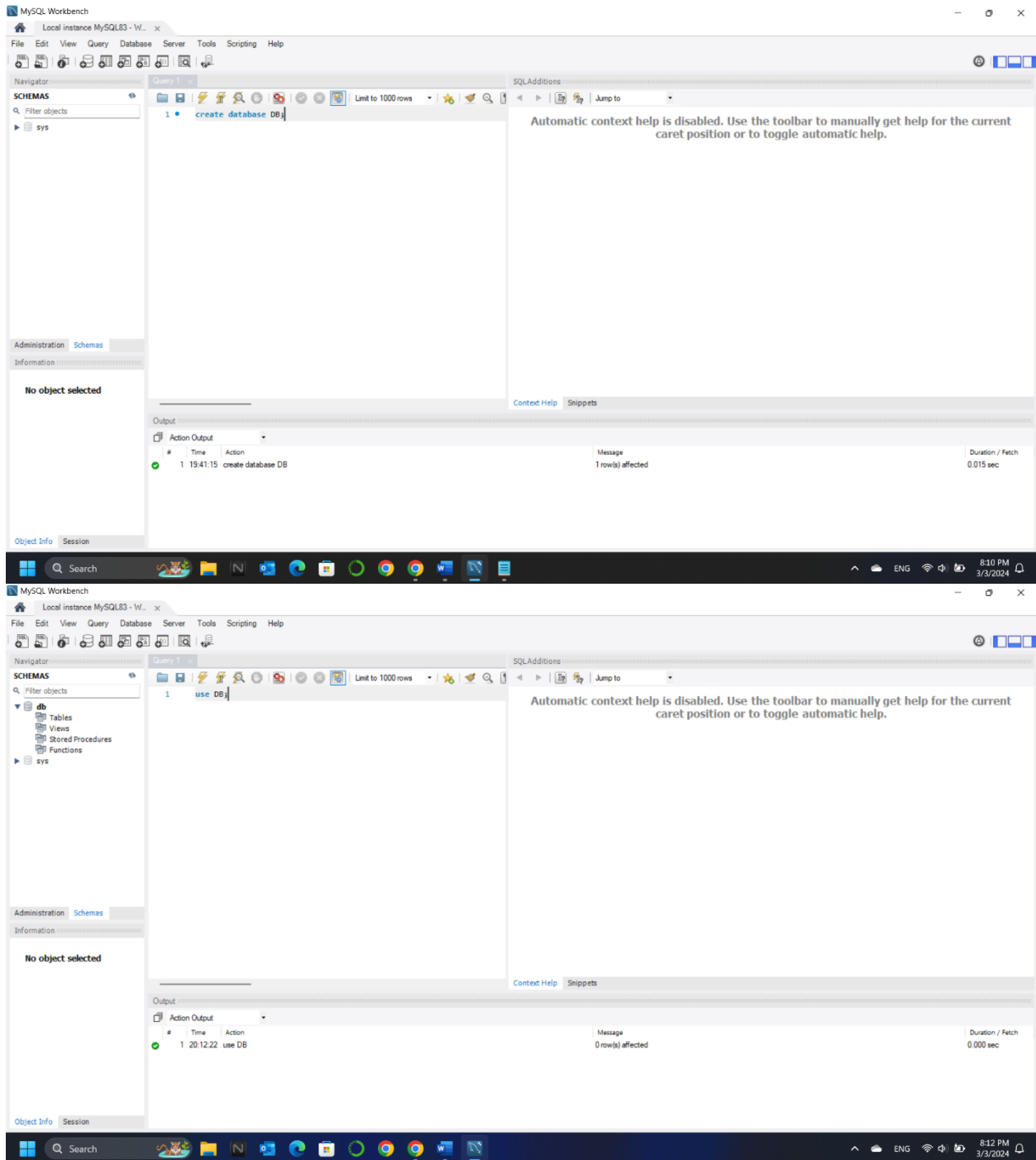
SDAIA GDB

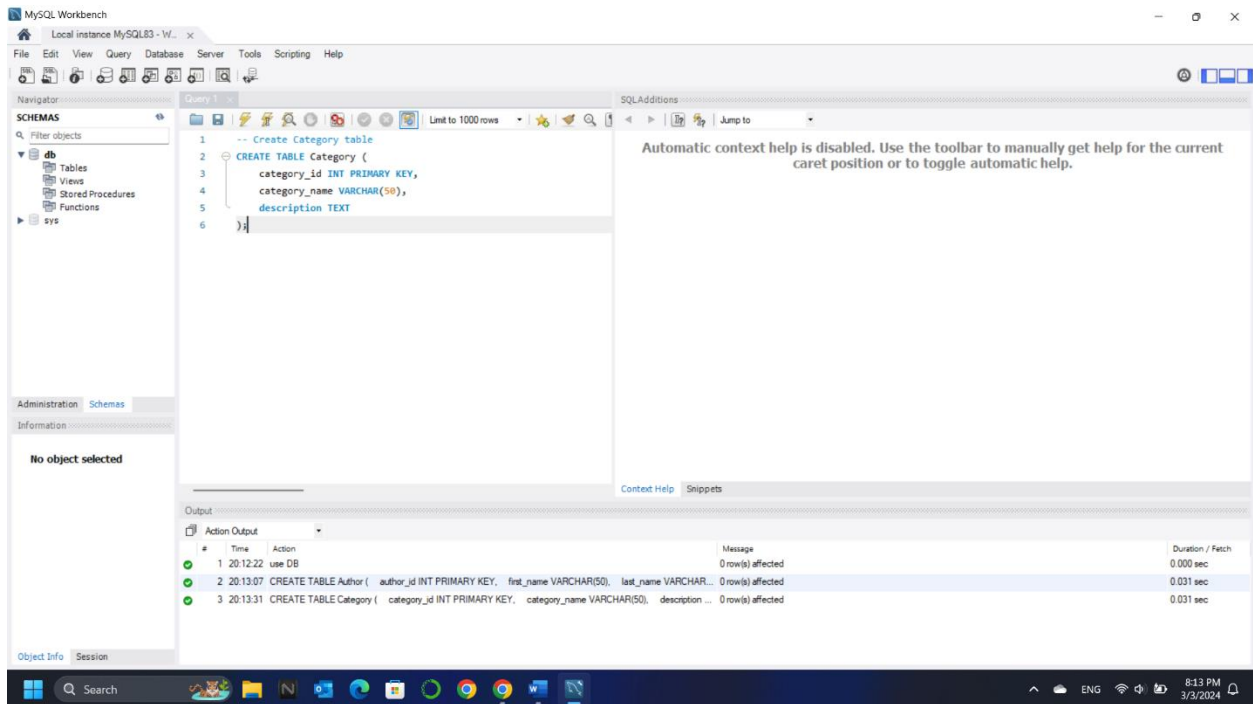
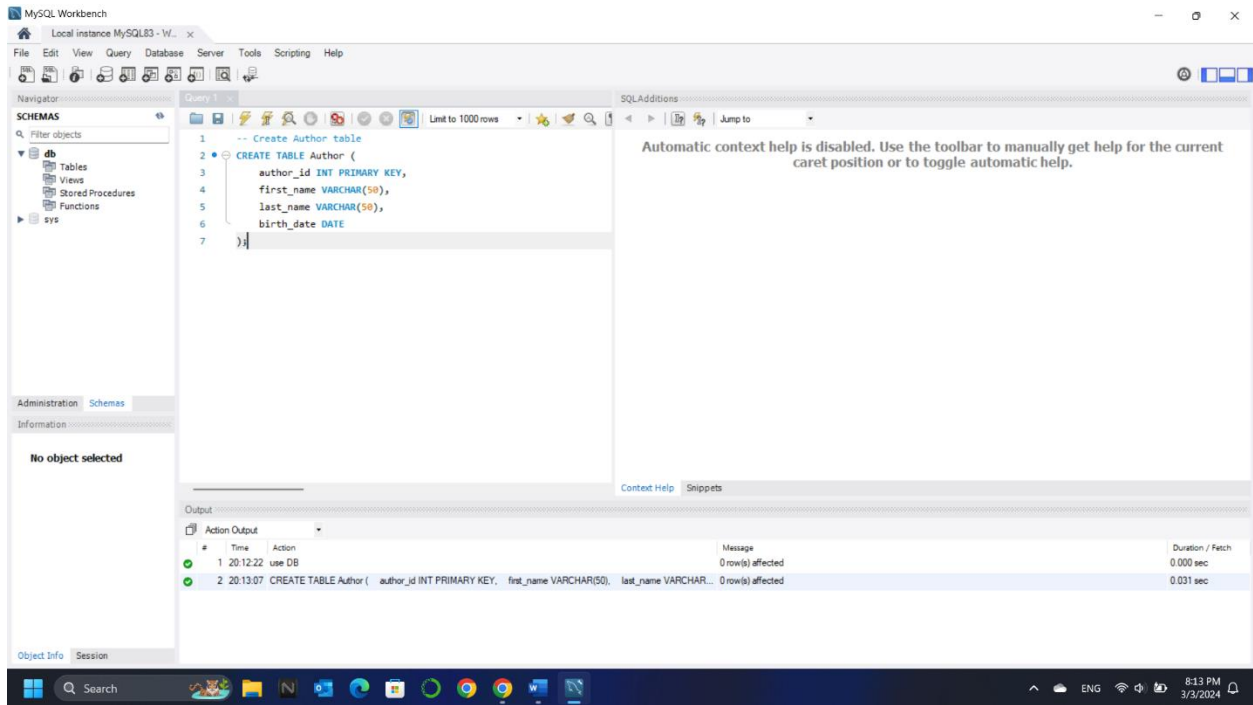
Track: Data Engineering

Conceptual Model & Logical Model:



Physical Model in MySQL:





MySQL Workbench

Local instance MySQL83 - W...

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Navigator

SCHEMAS

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Information

No object selected

Query 1

```
-- Create Book table
1 CREATE TABLE Book (
2   book_id INT PRIMARY KEY,
3   title VARCHAR(255),
4   ISBN VARCHAR(20),
5   publication_year INT,
6   author_id INT,
7   category_id INT,
8   FOREIGN KEY (author_id) REFERENCES Author(author_id),
9   FOREIGN KEY (category_id) REFERENCES Category(category_id)
10 )
11
```

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	20:12:22	use DB	0 row(s) affected	0.000 sec
2	20:13:07	CREATE TABLE Author (author_id INT PRIMARY KEY, first_name VARCHAR(50), last_name VARCHAR(50), ...	0 row(s) affected	0.031 sec
3	20:13:31	CREATE TABLE Category (category_id INT PRIMARY KEY, category_name VARCHAR(50), description ...	0 row(s) affected	0.031 sec
4	20:13:58	CREATE TABLE Book (book_id INT PRIMARY KEY, title VARCHAR(255), ISBN VARCHAR(20), publ...	0 row(s) affected	0.047 sec

Object Info Session

8:14 PM 3/3/2024

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Information

No object selected

Query 1

```
1 ALTER TABLE Book
2 MODIFY COLUMN title VARCHAR(100);
3
```

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Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	21:02:36	ALTER TABLE Book MODIFY COLUMN title VARCHAR(100)	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.094 sec

Object Info Session

9:03 PM 3/3/2024

MySQL Workbench

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Information

No object selected

Query 1

```
1 -- Add index on book_id in Book table
2 CREATE INDEX idx_book_id ON Book (book_id);
3
4 -- Add index on author_id in Book table
5 CREATE INDEX idx_author_id ON Book (author_id);
6
```

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	20:12:22	use DB	0 row(s) affected	0.000 sec
2	20:13:07	CREATE TABLE Author (author_id INT PRIMARY KEY, first_name VARCHAR(50), last_name VARCHAR(50), ...)	0 row(s) affected	0.031 sec
3	20:13:31	CREATE TABLE Category (category_id INT PRIMARY KEY, category_name VARCHAR(50), description ...)	0 row(s) affected	0.031 sec
4	20:13:58	CREATE TABLE Book (book_id INT PRIMARY KEY, title VARCHAR(255), ISBN VARCHAR(20), publ...	0 row(s) affected	0.047 sec
5	20:15:15	CREATE INDEX idx_book_id ON Book (book_id)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.015 sec
6	20:15:15	CREATE INDEX idx_author_id ON Book (author_id)	0 row(s) affected Records: 0 Duplicates: 0 Warnings: 0	0.016 sec

Object Info Session

8:15 PM 3/3/2024

MySQL Workbench

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Information

No object selected

Query 1

```
1 -- Insert records into Category table
2 INSERT INTO Category (category_id, category_name, description)
3 VALUES
4 (1, 'Fiction', 'Novels, short stories, plays, etc. '),
5 (2, 'Non-Fiction', 'Biographies, self-help, textbooks, etc. '),
6 (3, 'Science Fiction', 'Stories based on scientific concepts and futuristic themes. ');
```

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	20:18:29	INSERT INTO Category (category_id, category_name, description) VALUES (1, 'Fiction', 'Novels, short stories, ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec

Object Info Session

8:18 PM 3/3/2024

MySQL Workbench

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Navigator

SCHEMAS

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Information

No object selected

Query 1

Limit to 1000 rows

```
1 -- Insert records into Author table
2 INSERT INTO Author (author_id, first_name, last_name, birth_date)
3 VALUES
4 (1, 'John', 'Doe', '1990-01-01'),
5 (2, 'Jane', 'Smith', '1985-02-15'),
6 (3, 'Michael', 'Johnson', '1978-03-20'),
7 (4, 'Emily', 'Brown', '1982-04-10'),
8 (5, 'William', 'Jones', '1995-05-25');
```

SQLAdditions

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Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	20:18:29	INSERT INTO Category (category_id, category_name, description) VALUES (1, 'Fiction', 'Novels, short stories, ...)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
2	20:19:29	INSERT INTO Author (author_id, first_name, last_name, birth_date) VALUES (1, 'John', 'Doe', '1990-01-01).	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.015 sec

Object Info Session

MySQL Workbench

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Information

No object selected

Query 1

Limit to 1000 rows

```
1 -- Insert records into Book table
2 INSERT INTO Book (book_id, title, ISBN, publication_year, author_id, category_id)
3 VALUES
4 (1, 'Book 1', 'ISBN001', 2020, 1, 1),
5 (2, 'Book 2', 'ISBN002', 2019, 2, 2),
6 (3, 'Book 3', 'ISBN003', 2018, 3, 1),
7 (4, 'Book 4', 'ISBN004', 2017, 4, 2),
8 (5, 'Book 5', 'ISBN005', 2016, 5, 1);
```

SQLAdditions

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Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	20:18:29	INSERT INTO Category (category_id, category_name, description) VALUES (1, 'Fiction', 'Novels, short stories, ...)	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.000 sec
2	20:19:29	INSERT INTO Author (author_id, first_name, last_name, birth_date) VALUES (1, 'John', 'Doe', '1990-01-01).	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.015 sec
3	20:20:33	INSERT INTO Book (book_id, title, ISBN, publication_year, author_id, category_id) VALUES (1, 'Book 1', 'ISBN...	5 row(s) affected Records: 5 Duplicates: 0 Warnings: 0	0.015 sec

Object Info Session