



Experiment-1

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1. Aim:

a.) Author-Book Relationship Using Joins and Basic SQL Operations.

Patient

- Design two tables — one for storing author details and the other for book details.
- Ensure a foreign key relationship from the book to its respective author.
- Insert at least three records in each table.
- Perform an INNER JOIN to link each book with its author using the common author ID.
- Select the book title, author name, and author's country.

| Author_id | Name | country |
|-----------|--------------------|---------|
| 1 | JK Rowling | UK |
| 2 | George R.R. Martin | USA |
| 3 | Eichiro Oda | Japan |

| book_id | Title | Author_id |
|---------|-----------------|-----------|
| 1 | Harry Potter | 1 |
| 2 | Game of Thrones | 2 |
| 3 | The One Piece | 3 |

2. Objective:

- To understand how to use JOINS in SQL.
- To understand the basic SQL Queries.
- To learn how to create Foreign keys in SQL.

3. DBMS Script :

Query 1:

-- Create Author table

```
CREATE TABLE Author (  
    author_id INT PRIMARY KEY,  
    name VARCHAR(100),  
    country VARCHAR(100)  
);
```

-- Create Book table with a foreign key to Author

```
CREATE TABLE Book (  
    book_id INT PRIMARY KEY,  
    title VARCHAR(200),  
    author_id INT,  
    FOREIGN KEY (author_id) REFERENCES Author(author_id)  
);
```

-- Insert data into Author

```
INSERT INTO Author (author_id, name, country) VALUES  
(1, 'J.K. Rowling', 'United Kingdom'),  
(2, 'George R.R. Martin', 'United States'),  
(3, 'Haruki Murakami', 'Japan');
```

-- Insert data into Book

```
INSERT INTO Book (book_id, title, author_id) VALUES  
(101, 'Harry Potter and the Philosopher\'s Stone', 1),  
(102, 'A Game of Thrones', 2),  
(103, 'Kafka on the Shore', 3);
```

-- Join the tables to get book title, author name, and country

```
SELECT  
    Book.title AS Book_Title,  
    Author.name AS Author_Name,  
    Author.country AS Author_Country  
FROM  
    Book  
INNER JOIN  
    Author ON Book.author_id = Author.author_id;
```



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Output :

| Book_Title | Author_Name | Author_Country |
|----------------------------------|--------------------|----------------|
| Harry Potter and the Philosopher | J.K. Rowling | United Kingdom |
| A Game of Thrones | George R.R. Martin | United States |
| Kafka on the Shore | Haruki Murakami | Japan |

4. Learning Outcomes:

- You will be able to write basic SQL queries.
- You will learn to perform JOINS in SQL.
- You will understand how to implement foreign keys.