Database Table Movie

Tables Details

Movies

id	Title	Release Year	Genre	Director
1	The Shawshank Redemption	1994	Drama	Frank Darabont
2	The Godfather	1972	Crime	Francis Ford Coppola
3	The Dark Knight	2008	Action	Christopher Nolan
4	Pulp Fiction	1994	Crime	Quentin Tarantino
5	Forrest Gump	1994	Drama	Robert Zemeckis

Customers

id	First Name	Last Name	Email	Phone
1	John	Doe	john@example.com	123-456-7890
2	Jane	Smith	jane@example.com	098-765-4321
3	Alice	Johnson	alice@example.com	555-555-5555
4	Bob	Brown	bob@example.com	444-444-4444
5	Charlie	Davis	charlie@example.com	333-333-3333

Rentals

id	Customer ID	Movie ID	Rental Date	Return Date
1	1	1	2023-10-01	2023-10-15
2	2	2	2023-10-02	2023-10-16
3	3	3	2023-10-03	2023-10-17
4	1	4	2023-10-04	2023-10-18
5	2	5	2023-10-05	2023-10-19
6	1	2	2023-10-06	2023-10-20
7	4	1	2023-10-07	2023-10-21
8	5	3	2023-10-08	2023-10-22
9	3	4	2023-10-09	2023-10-23
10	2	1	2023-10-10	2023-10-24

Normalization Explanation

To ensure that the tables are in Third Normal Form (3NF):

1. **First Normal Form (1NF)**: Each table has a primary key, and all attributes are atomic (no repeating groups).
2. **Second Normal Form (2NF)**: All non-key attributes are fully functional dependent on the primary key. In our design, each attribute in the tables relies only on the primary key of its respective table.
3. **Third Normal Form (3NF)**: There are no transitive dependencies. For example, in the `customers` table, the customer details do not depend on anything other than the customer ID. Similarly, the movie details in the `movies` table are only dependent on the movie ID.