

Functional Dependencies

CUSTOMER

Custid \rightarrow firstname

Custid \rightarrow lastname

Custid \rightarrow status

Custid \rightarrow gender

Custid \rightarrow dob

Custid \rightarrow emailid

Custid \rightarrow address

Custid \rightarrow phoneno

emailid \rightarrow Custid

emailid \rightarrow firstname

emailid \rightarrow lastname

emailid \rightarrow status

emailid \rightarrow gender

emailid \rightarrow dob

emailid \rightarrow address

emailid \rightarrow phoneno

Both Custid and emailid can be keys. However, we will be using Custid as Primary Key. No BCNF violations.

CUSTOMER_RATING

Custid, film_id \rightarrow title, rating

MVD:

Custid \twoheadrightarrow title, film_id, rating

GENRE

Genre_id → name

FILM

Film_id → title

Film_id → director

Film_id → production_company

Film_id → genre_id

Film_id → minimal_age

Film_id → film_episode_id

Title, film_episode_id → director

Title, film_episode_id → production_company

Title, film_episode_id → genre_id

Title, film_episode_id → minimal_age

Title, film_episode_id → film_id

MVD:

Title, film_episode_id →> director, production_company, genre_id, minimal_age, film_id

Film_id and (title, film_episode_id) form keys, so we are not splitting the table. There won't be any BCNF violations.

MEDIUM

Medium_id → medium_type

EXEMPLAR

Exemplar_id → Exemplar_name

Exemplar_id → address

Exemplar_id → phone_no

MOVIESOFFERED

offered_id → exemplar_id

offered_id → film_id

offered_id → medium_id

offered_id → price_per_day

offered_id → availability_status

BORROWING

Borrowing_id → offered_id

Borrowing_id → custid

Borrowing_id → start_date

Borrowing_id → end_date

Borrowing_id → total_price

Borrowing_id → VAT