Group 3_8

Play Archive

Group Leader :

Jay Sanghani (202101185)

Group Members :

Dhyey Ladani (202101182)

Jay Sanghani (202101185)

Utsav Maru (202101195)

Krish Rupapara (202101198)

DBMS PROJECT GROUP 3_8

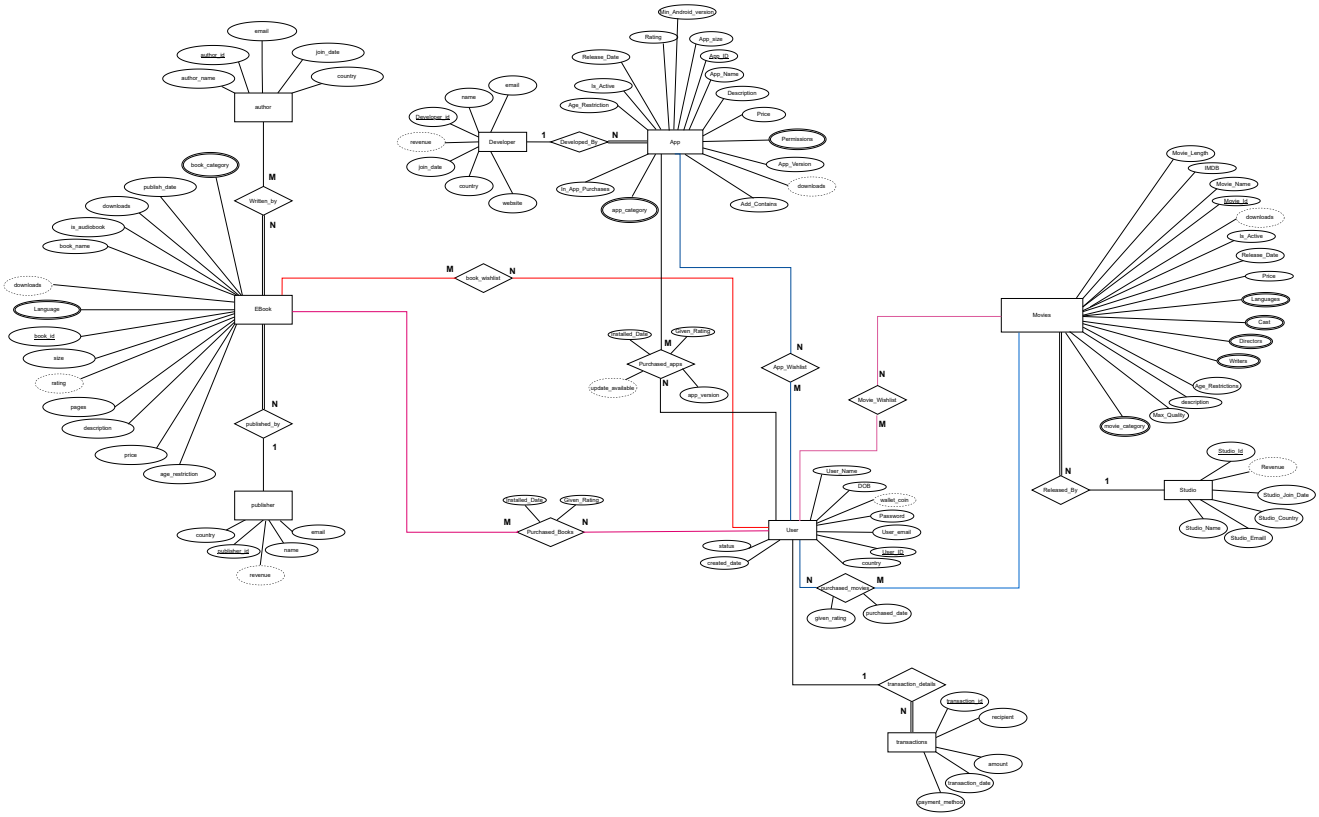
PLAY ARCHIVE

ID: 2021 01182

2021 01185

2021 01195

2021 01198



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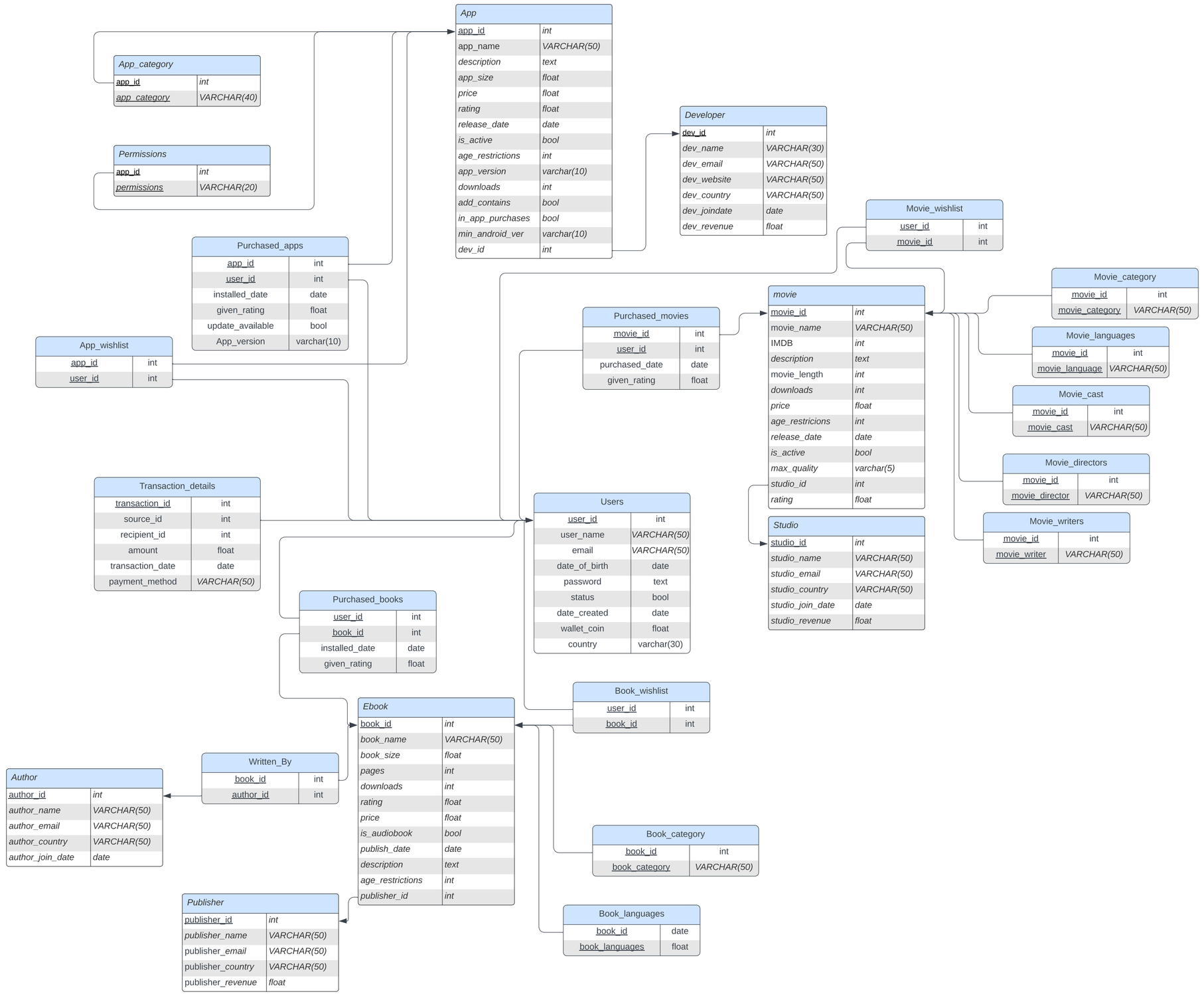

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Normalization proof

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Functional Dependencies (FDs) :

1) App

Minimal FD :

app_id → { app_name, description, app_size, price, rating,
release_date, is_active, age_restrictions,
app_version, downloads, add_contains,
in_app_purchases, min_android_ver, dev_id }

Key : app_id

Type : BCNF

Reason : All attributes of App relation is directly dependent on the key { app_id }.

2) Permissions

Minimal FD :

{ app_id, permissions } → ∅

Key : { app_id, permissions }

Type : BCNF

Reason : All attributes of Permission relation are primary key.

3) App_Category

Minimal FD :

{app_id, app_category } → ∅

Key : { app_id, app_category }

Type : BCNF

Reason : All attributes of App_category relation are primary key.

4) Purchased_apps

Minimal FD :

{ app_id, user_id } → { installed_date, given_rating, update_available, app_version }

Key : { app_id, user_id }

Type : BCNF

Reason : All attributes of Purchased_apps relation is directly dependent on the key { app_id, user_id }.

5) Developer

Minimal FD :

dev_id → { dev_name, dev_email, dev_website, dev_country, dev_joindate, dev_revenue }

Key : dev_id

Type : BCNF

Reason : All attributes of Developer relation is directly dependent on the key { dev_id }.

6) App Wishlist

Minimal FD :

{ app_id, user_id } → ∅

Key : {app_id, user_id}

Type : BCNF

Reason : All attributes of App_wishlist relation are primary key {app_id, user_id}.

7) Movie

Minimal FD :

movie_id → {movie_name, IMDB, movie_length, description, downloads, is_Active, release_Date, price, age_restriction, max_Quality, studio_id}

Key : movie_id

Type : BCNF

Reason : All attributes of Movie is directly dependent on the key { movie_id}.

8) Movie_Category

Minimal FD :

{movie_id, movie_category } → ∅

Key : { movie_id, movie_category }

Type : BCNF

Reason : All attributes of Movie_category relation are primary key.

9) Directors

Minimal FD :

{ movie_id, directors} → ∅

Key : { movie_id, directors}

Type : BCNF

Reason : All attributes of directors relation are primary key.

10) Writers

Minimal FD :

{ movie_id, writers } → ∅

Key : {movie_id, writers}

Type : BCNF

Reason : All attributes of writers relation are primary key.

11) Languages

Minimal FD :

{ movie_id, languages } → ∅

Key : { movie_id, languages }

Type : BCNF

Reason : All attributes of Languages relation are primary key.

12) Cast

Minimal FD :

{movie_id, cast } → ∅

Key : { movie_id, cast }

Type : BCNF

Reason : All attributes of cast relation are primary key.

13) Purchased Movies

Minimal FD :

{ user_id, movie_id } → {purchased_date, given_rating}

Key : { movie_id, user_id }

Type : BCNF

Reason : All attributes of Purchased_Movies relation is directly dependent on the key { movie_id, user_id }.

14) Studio

Minimal FD :

studio_id → {Revenue, Studio_join_date, Studio_Country, studio_Name, Studio_Email}

Key : studio_id

Type : BCNF

Reason : All attributes of Studiorelation is directly dependent on the key { studio_id}.

15) Movie_Wishlist

Minimal FD :

{ movie_id, user_id } → ∅

Key : { movie_id, user_id }

Type : BCNF

Reason : All attributes of Movie_wishlist relation are primary key.

16) Book

Minimal FD :

book_id → {book_name, book_size, pages, downloads, rating, price, is_audiobook, publised_date, description, age_restriction, publisher_id}

Key : book_id

Type : BCNF

Reason : All attributes of Book relation is directly dependent on the key { book_id }.

17) Written_By

Minimal FD :

{book_id, author_id} → ∅

Key : {book_id, author_id}

Type : BCNF

Reason : All attributes of Written_by relation are primary key.

18) Book_Category

Minimal FD :

{book_id, book_category } → ∅

Key : {book_id, book_category}

Type : BCNF

Reason : All attributes of Book_category relation are primary key.

19) Book Languages

Minimal FD :

{book_id, language} → ∅

Key : {book_id, language}

Type : BCNF

Reason : All attributes of Book_languauges relation are primary key.

20) Publisher

Minimal FD :

publisher_id → {publisher_name, publisher_email,
publisher_country, publisher_revenue}

Key : publisher_id

Type : BCNF

Reason : All attributes of Publisher relation is directly dependent on

the key { publisher_id }.

21) Author

Minimal FD :

author_id → {author_name, author_email, author_country, author_join_date}

Key :

author_id

Type : BCNF

Reason : All attributes of Authorrelation is directly dependent on the key { author_id }.

22) Purchased_books

Minimal FD :

{ book_id, user_id } → {installed_date, given_rating}

Key : { book_id, user_id }

Type : BCNF

Reason : All attributes of relation is directly dependent on the key { book_id, user_id }.

23) Book_Wishlist

Minimal FD :

{book_id, user_id } → ∅

Key : { book_id, user_id}

Type : BCNF

Reason : All attributes of Book_wishlist relation are primary key.

24) User

Minimal FD :

user_id → { user_name, password, email, date_of_birth, status, date_created, wallet_coin }

Key : user_id

Type : BCNF

Reason : All attributes of User relation is directly dependent on the key { user_id }.

25) Transaction details

Minimal FD :

transaction_id → { source, recipient, amount, ransaction_date, payment_method }

Key : transaction_id

Type : BCNF

Reason : **All attributes of Transaction_details relation is directly dependent on the key { transation_id }.**