DATABASE DESIGN DOCUMENT

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TOPIC: OTT Subscription Model

DATABASE PURPOSE:

The purpose of the database is to design and implement the relational database for OTT Subscription Business to manage the content, subscribers, advertisements, track the number of logins for active users and the new users coming on the platform. This model will also help the business owner to build the growth strategies for increasing the subscriber engagement by doing the analysis on various parameters such as likes, dislikes, ratings, trending, popular and award-winning content which will make user to continue the subscription and attract new users to the platform. Also, this model help to evaluate the reason behind increasing or decreasing active subscriber.
Through this model the business owners will be able to find out the investments made on purchasing the content for platform and the revenue generated through subscriptions and advertisements so that they can periodically review their profit and loss statements and make appropriate business strategies.
This database can be accessed and controlled solely by business officials responsible for making growth strategies and enhancing user experience.

BUSINESS PROBLEMS ADDRESSED:

- To analyze location wise content performance for the business owner to modify the content
- To find out the trending content to improve the engagement rate of subscriber
- To find out the all-time popular content to improve the engagement rate of subscriber
- To find out the award-wining content to improve the engagement rate of subscriber
- To find the top actors and directors so that the business can bring up more content to increase user engagement.
- To analyze the investment made by the business owner for buying the content rights
- To analyze the revenue generated by the business owner with the help by selling the subscription plan
- To analyze the location wise subscriber growth and make the strategies for the low performing areas

- To do the analysis of active subscribers with an active subscription plan and target the one with no subscription
- To study the disengagement rate by analyzing the reason for cancellation
- To monitor the number of devices and login sessions to resolve the multiple login issue.

BUSINESS RULES:

- One UserAccount can have zero or many Logins (Sessions)
- One UserAccount can have one or many Devices
- One UserAccount can have zero or many RequestReportContent
- One UserAccount can have zero or many CustomerFeedback
- One UserAccount can have zero or one BillingInfo
- One BillingInfo must have one SubscriptionPlan
- One SubscriptionPlan can have zero or many Advertisements
- One SubscriptionPlan can have one or many TVSeries
- One SubscriptionPlan can have one or many Movies
- One PurchaseOrder can have one or many Movies
- One PurchaseOrder can have one or many TVSeries
- One TVSeries can have one or many Seasons
- One Season can have one or many Episodes
- One Episode can have zero or many Reviews
- One Season can have zero or many Reviews
- One Movie can have zero or many Reviews
- One TVSeries can have zero or many Reviews
- One BillingInfo can have only one AddressInfo
- One AddressInfo can have only one StreetAddress

DESIGN DECISIONS:

Entity	Why entity included	How entity is related to another entity
Login	This entity is one of the important parameters and is required to keep all the information related to an individual subscriber. It will maintain details like Login Type, Email ID, and Password of the subscriber. It will also store the time stamp of the user while signing in. This data is also used to get all the contact information of different subscribers whenever account recovery is required.	This entity is directly related to UserAccount entity with many to one relationship

UserAccount	This entity contains personal information of the user required for creating login details. It comprises of Account Id, First and Last Name, Gender, Date of Birth, Phone Number, Email ID and Password, Address, Country and any information related to the user.	This entity is linked to CustomerFeedback, RequestReportContent, Devices with one to many relationship, Login with one to one relationship, and BillingInfo entity with one to many relationship.
RequestReportContent	This entity is for tracking the request or report requests by the users. The user will put in their requests to request or report content, depending upon the threshold the organization will decide whether to get the content on the platform or remove it.	This entity is linked to UserAccount entity with many to one relationship.
BillingInfo	The billing details like billing address, card details will be handled by this entity.	This entity is linked to UserAccount entity with zero to one relationship and SubscriptionPlan entity is linked with one-to-one relationship.
SubscriptionPlan	This entity will help us to track the details of plan taken by user and the prices charged to them along with the duration of plan and the active status of user	This entity is linked to Advertisements with a one-to-many relationship, Movies and TVSeries with one to many and the BillingInfo entity has a one-to-one relationship.
Movies	Movies table includes the details of movie id, name, actor, director, release year	This entity is linked to PurchaseOrder and SubscriptionPlan entities with many-to-one relationship, and the Reviews with one to many relationship.
TVSeries	TV Series includes the details of tv series id, name, actor, director, release year, number of seasons and number of episodes	This entity is linked to PurchaseOrder and SubscriptionPlan entities with many-to-one relationship, and the Reviews with one to many and Seasons with oneto-many relationship.
PurchaseOrder	This entity will help us to identify the amount of investment made in our platform to buy the rights of displaying the content and the duration of airing along with their prices.	This entity is linked to Movies and TVSeries entities with one to many relationships.

Reviews	Review table includes the details of likes, dislikes, and rating against the movies/tvshows to manage the trending, popular and award wining contents	This entity is linked to Movies, TVSeries, Season, and Episode entities with many to one relationship.
CustomerFeedback	This entity will store the information provided by the customers based on their experience about the platform.	This entity is linked to UserAccount entity with many to one relationship.
Advertisements	This entity is will help us to track the revenue generated by selling advertisement which include the name and information of customer, time period of airing the advertisement and the amount charged to them.	This entity is connected to the SubscriptionPlan entity with many to one relationship.
Devices	This entity will help keep the track of number of devices connected by the user. It will include Device and Account ID's of the user and it will hold the names of Registered Devices.	This entity is linked to UserAccount with many to one relationship.
Seasons	This entity includes different seasons of the TVSeries. This entity will also be linked to the review table to find out the trending, popular and award-winning seasons.	This entity is related to Episodes with one to many relationship and is related to Reviews with many to one relationship.
Episodes	This entity includes different episodes of the seasons. This entity will also be linked to the review table to find out the trending, popular and award-winning episodes.	This entity is related to Reviews entities with many to one relationship.
AddressInfo	This entity includes the residential information of the user where it stores the information like city, state, country, and zip code of the respective user.	This entity is liked to BillingInfo to fetch the billing address of the user while taking subscription with one to one relationship.
StreetAddress	This entity is the extended part of the address table to give the more details of the user residence which includes the information like street number, street name and apartment number.	This entity is liked with the address table with one to one relationship.

CHANGES INCORPORATED

- We have replaced the Age attribute with DOB in the User Account, and now we can calculate the age from it.
- We have incorporated the Address attribute in BillingInfo, and further we have split it into atomic attributes in the form of Address and Street attribute table.
- About PurchaseOrder attribute, the purpose of it is to store the Purchase Orders of movies and tv series for which the company buys rights. It is not about a Customers Purchase Orders so for that reason we are keeping it same.