Database Management & Application

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NETFLIX- Case Study

<u>Description of the Company</u>

Netflix is a subscription-based streaming service that allows our members to watch TV shows and movies on an internet-connected device .Depending on your plan, you can also download TV shows and movies to your iOS, Android, or Windows 10 device and watch without an internet connection. Netflix content varies by region and may change over time. You can watch a variety of award-winning Netflix originals, TV shows, movies, documentaries, and more. The more you watch, the better Netflix gets at recommending TV shows and movies. You can watch Netflix through any internet-connected device that offers the Netflix app, including smart TVs, game consoles, streaming media players, set-top boxes, smartphones, and tablets. You can also watch Netflix on your computer using an internet browser. Each Netflix plan determines the number of devices you can watch Netflix on at the same time and whether you can watch in High Definition (HD), Full High Definition (FHD), or Ultra High Definition (UHD).

The goal of Netflix is to entertain the world. Regardless of user's tastes, their location Netflix wants to give access to best-in-class TV shows, documentaries, feature films and mobile games without any ads.

<u>User Requirements translated into Business requirements</u>

The users of Netflix would expect the following
- Seamless Sign up flow
  - One customer can sign up only once
  - Customer uses Mobile Number. One mobile number can be used for only one sign up. Every time a new customer signs up, a unique customer ID is generated and assigned to that customer
  - During sign up, we capture the mobile number, device type where the customer is trying to sign up (Mobile, Laptop, TV), Primary language selected, date of sign up, First Name, Last Name and Country are also captured
- Easy login flow
  - Each login leads to a session for a customer, which is identified by the Session ID
  - Customer ID, login time, logout time are recorded for every session. Logout time is the time when the session ends. The difference between login time and logout time is the session length. The device type is also captured where the customer has logged in
- Multiple profiles
  - When a user logs in, they can choose a profile and watch the content in that profile.
  - Each profile has a unique Profile ID and Profile Name
- Types of content

- o There are only 2 types of content on Netflix which are movies are series
- o Every content on Netflix has a unique Content ID, title of the content, Genre, Language, release date and rating
- o Series also has Season and episode as other attributes whereas a movie has Director as an attribute
- Understanding all subscription plans
  - o Netflix has many subscription plans, but each plan has a unique Subscription ID, price of the subscription, Number of devices you can watch Netflix on with that particular subscription and definition (UHD, HD, etc.)
- Easy payment flow
  - o Every user can setup a single payment method on Netflix from where the money is deducted for their subscriptions
  - o Every customer, when they choose a subscription plan, sets up a payment method which captures the payment type , if it's credit or debit card, masked card number, masked cvv, card holder name, expiry. The details of the card are saved in masked format to ensure financial security
- Ability to add stuff to their watchlist to watch later
  - o A user can add stuff to their watchlist to watch later to their profiles
  - o Each watchlist created has a unique watchlist ID.
- Play games on mobile
  - o Every game on Netflix will have a unique game id. It also has the genre of the game, title of the game and release date

Cardinality Constraints

- One user can sign up only once which assigns the user a unique customer ID
- One user can login multiple times. Every time a user logs in, a new session is created, which is identified by the session ID. Each session belongs to only one user
- There are only 2 types of content, Series, and movies and for this project, we will not consider any other types of content. A content can only be either series or a movie, but not both
- One user can take only one subscription at one time and one subscription plan can be subscribed by many users
- A customer can setup only one payment method. The payment method is used to pay the subscription for that customer
- A customer can add any number of content to his/her watchlist. Any content can be added to the watchlist by any number of customers
- A customer can play any number of mobile games and a mobile game can be played by any number of customers
- A customer can watch many different contents in one session and same content can be watched multiple times on multiple sessions
- Each Profile will have one watchlist and every watchlist is associated with only one profile.

Based on the above details, the ERD diagram is presented below

ERD Model