**Streaming Content Management System (Netflix)**

Netflix is one of the most popular streaming services for viewers to watch Movies, TV shows, Web Series etc. Having a database is advantageous as there are numerous users and large collection of streaming data. In this project we are aiming to design a database which contains information related to Movies, Users, Streaming Activity, Subscription plans and User activity. This database enables us to capture important insights related to

1. Region and age-group specific user preferences
2. Streaming demand based on time and region

Region and age-group specific user preferences could be useful to provide tailored content to the users. Reports of region based streaming demand history can be helpful to minimize internet congestion by using proactive caching system by anticipating demand.

Creating an exhaustive database capturing all aspects of Netflix streaming service is out of the scope of this project. Hence, we chose important aspects related to streaming content management.

**Data Description:**

Users:

Users are the people who perform streaming activity on Netflix. Users can stream Netflix content with different subscription plans. User can have only one subscription plan.

* Every user has a unique ID
* Name of the user (Assume name is composed of first name and last name)
* Date of the Birth (DOB) of the user
* Gender of the user
* Email ID of the user (Capture only one Email-ID of the user. Every user has a unique email id)
* Telephone number of the user (Capture multiple telephone numbers of the user)
* Address of the user (Assume address is composed of apartment/house number, Street, city, state and country of the user)
* Username of the user (Every user has a unique username)

Note: Age of the user and age group category (Kid, Teen, Adult) can be computed using DOB attribute. Age group category is specified as follows

* Kid ----🡪 below 13
* Teen ----🡪 13 – 18
* Adult ----🡪 18 and above

Movies:

Movies are the streaming content present in Netflix which can be watched by users. Movies on Netflix get streamed by zero or more users A movie has an original language of making and can be streamed in multiple languages using different audio language options. Every movie has maturity rating (PG, PG-13, R etc.). Movies are categorized into genres.

* Every movie has a unique ID
* Every movie has a movie name
* Genre of the movie
* Duration of the movie
* Content length category (90min – 120 min, 120 min – 150 min, 150min – 180min, more than 180 min)
* Release date of the movie
* Director of the movie
* Actor (Protagonist) in the movie
* Language of the movie (capture original language of the movie)
* Age group category of the movie
* Maturity rating of the movie

Languages:

Each movie has one or more audio and subtitle languages. Various movies have same audio and subtitle language. Capture languages only when it exists as either subtitle or audio language for at least one movie.

* Every language has a unique Language Name
* Subtitle language (If subtitles are present in that language then mention Yes otherwise mention No)
* Audio language (If audio is present in that language then mention Yes otherwise mention No)

Streaming Activity:

Streaming Activity includes user watch history on Netflix. User can stream movies from different location other than User location. A user can have zero or more streaming activities with a unique stream ID for each activity. Every streaming activity is associated with one user. A movie can be watched with different subtitle languages and audio languages.

* Every stream activity has a unique ID
* Location of the streaming activity
* Streaming activity start date and time
* Streaming activity end date and time
* Streaming duration (Streaming duration is derived from streaming activity start and end time)
* Review by the user (user can like/dislike/do nothing to a particular streamed movie)
* Streaming resolution (480p, 720p, 1080p, 4K, Dolby vision)
* Screen number (two users with same Netflix account can watch with different devices)
* Subtitle’s language of the streaming content
* Audio language of the streaming content

Note: We assume that the user does not change audio language and subtitle language of the streaming content while streaming

Activity log:

Activity log contains the activities done by users (Account Creation, log in, log out, Watching etc.). A user can do one or more activities on Netflix. Each Activity log is associated with only one user.

* Every activity has a unique ID
* Type of the activity (Account Creation, log in, log out, Watching etc.)
* Date and time of the activity

Subscription Plan:

Every Netflix user should have only one subscription plan. A subscription plan can be subscribed by one or more users.

* Every subscription plan has a unique ID
* Type of the subscription plan (Basic, Standard, Premium)
* Maximum content resolution based on plan (Basic subscription users can stream with a maximum resolution of 720p whereas premium subscribers can stream with a maximum resolution of 4K)
* Cost for the subscription plan
* Number of screens per plan
* Plan duration

**Business Requirements:**

* Identify popular movie genres with respect to age group
* Identify movie language preferences of the viewers with respect to location
* Identify Director/Actor movie preferences of the viewers with respect to location, age group and language
* Identify most liked and most viewed content with respect to location, age group, language, and genre
* Identify popular content length category with respect to age group, genre, and language
* Identify movie maturity rating preferences of the viewers with respect to age group
* Identify the most popular membership plan for viewers with respect age group
* Identify seasonal subscription demand for Netflix (Fall/summer/spring) with respect to location and age group
* Identify the daily, weekly, monthly, and seasonal streaming demand with respect to location
* Identify the most popular subtitles language for viewers with respect to location
* Identify the most popular audio language for viewers with respect to location