



Technical Documentation

Case Study: Real-World Problems and youtube's Innovative Solutions

In conclusion, YouTube by far has attained its objective of solving real world problems and is constantly improving upon it. It has diversified itself into the field of education, entertainment, health, empowerment etc. YouTube's consistent approach towards improving and making its platform more intuitive has helped it to grow big. Undoubtedly YouTube has strengthened itself by enabling a flexible work flow algorithm.

Imminent Utilities/Attributes:

1. User Profile - User ID, Username, Email ID, Profile Picture, Subscription, Upload, Videos, Liked Videos, Playlists, Video, Channel, Playlist, Subscription, Comment.
2. Video - Video ID, Title, Description, Duration, Upload Date, Views Count, Likes Count, Dislikes Count, Thumbnail URL, Privacy Settings, Location, Comments, Tag, Creator, Video URL.
3. Channel - Channel ID, Channel Name, Description, Subscribers Count, Created Date, Channel Owner, Videos, Playlists, Featured Channels, Profile Image URL.
4. Playlist - Playlist ID, Playlist Title, Description, Created Date, Videos, Creator.
5. Comment - Comment ID, Comment Text, Commenter, Comment Date, Likes Count.
6. Subscription - Subscription ID, Subscriber, Channel, Subscription Date

Relationships:

1. User uploads Video (One-to-Many): Each user can upload multiple videos, but each video is uploaded by one user.
2. User creates Channel (One-to-One): Each user can have one channel.

3. Users can subscribe to Channel (Many-to-Many): Many users can subscribe to many channels, so this would require a junction table to represent subscriptions.
4. Video can be in Playlist (Many-to-Many): Many videos can be in many playlists, so a junction table is needed to represent video-playlist relationships.
5. Users can comment on Video (One-to-Many): Each user can leave multiple comments on various videos.
6. Video can have Comments (One-to-Many): Each video can have multiple comments.

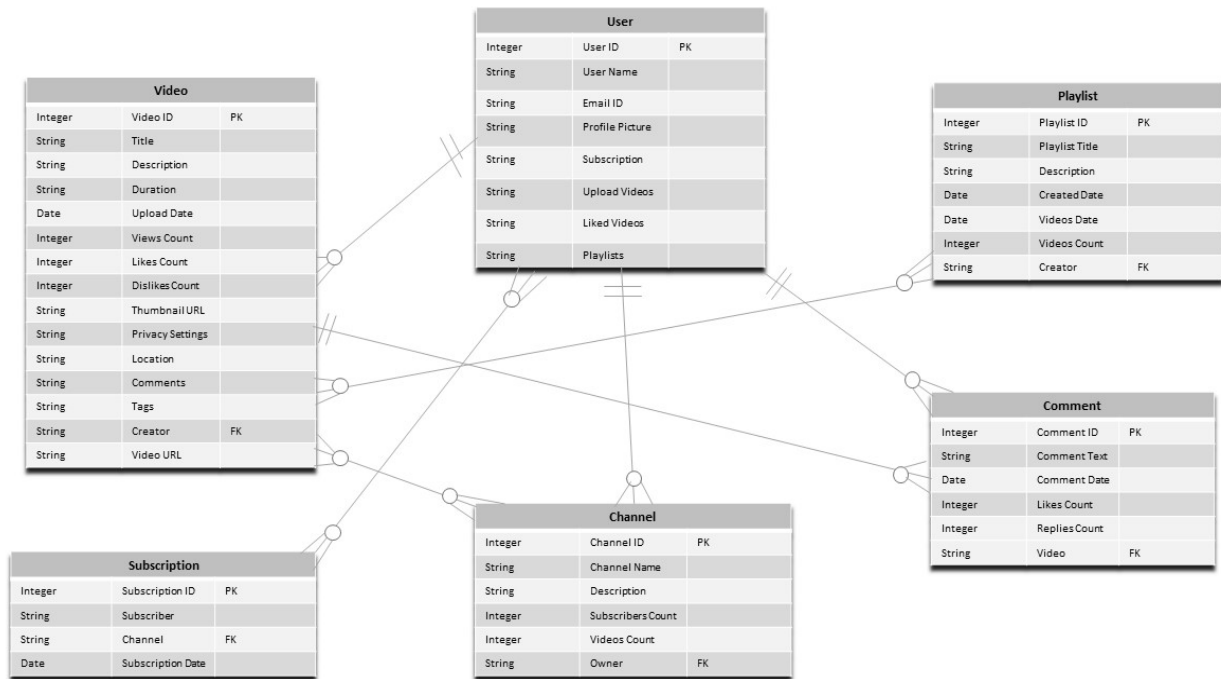
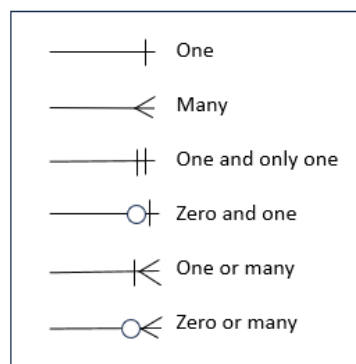


Fig: ER Diagram



Top Features of YouTube:

1. Video Hosting
2. Search and Discovery
3. Subscription
4. Monetization
5. Live Streaming
6. YouTube Premium
7. YouTube TV
8. Community Features
9. Customization
10. YouTube Shorts
11. YouTube Kids
12. Copyright Protection
13. Playback Quality
14. Video Editing Tools
15. VR and 360 degree Videos