MEDIA STREAMING WITH IBM CLOUD VIDEO STREAMING

Phase 1: Problem Definition and Design Thinking

Outlook:

Streaming media is a multimedia for playback using an offline or online media platform. Technically, the stream is delivered and consumed in a continuous manner from a client, with little or no intermediate storage in network elements. *Streaming* refers to the delivery method of content, rather than the content itself.

Distinguishing delivery method from the media applies specifically to telecommunication networks, as most of the traditional media delivery systems are either inherently *streaming* (e.g. radio, television) or inherently *non-streaming* (e.g. books, videotapes, audio CDs). There are challenges with streaming content on the Internet. For example, users whose Internet connection lacks sufficient bandwidth may experience stops, lags, or poor buffering of the content, and users lacking compatible hardware or software systems may be unable to stream certain content. With the use of buffering of the content for just a few seconds in advance of playback, the quality can be much improved.

Livestreaming is the real-time delivery of content during production, much as live television broadcasts content via television channels. Livestreaming requires a form of source media (e.g. a video camera, an audio interface, screen capture software), an encoder to digitize the content, a media publisher, and a content delivery network to distribute and deliver the content.

Problem Definition:

The existing media streaming platform using IBM Cloud Video Streaming faces significant challenges in terms of efficient content delivery, optimal user experience, and effective content management. These challenges include suboptimal video playback performance, limited personalization features, difficulty in content discovery, and complex content management for both users and content creators. Enhancements and improvements are needed to create a seamless, user-centric, and scalable media streaming platform that leverages the capabilities of IBM Cloud Video Streaming to provide an exceptional viewing experience while also streamlining content upload, management, and monetization processes.

Design Thinking:

Platform Definition:

The 'Media Streaming with IBM Cloud Video Streaming' platform is a robust and user-centric online video streaming service built on the IBM Cloud infrastructure. This platform is designed to facilitate the seamless distribution and consumption of

multimedia content, including videos, live broadcasts, and on-demand streaming, while leveraging the advanced capabilities of IBM Cloud Video Streaming technology.

User Interface Design:

Homepage:

- Showcase featured content, trending videos, and personalized recommendations.
- Include a search bar for easy content discovery.
- Display navigation options to browse genres, categories, and user profiles.

User Registration/Login:

- Place registration and login options prominently.
- Offer the ability to sign up or log in with social media accounts for convenience.

User Profile:

- Allow users to customize their profiles with profile pictures, bios, and contact information.
- Display user activity, such as recently viewed content and uploaded videos.

Content Discovery:

- Implement a visually appealing grid or list view for browsing videos.
- Include filters and sorting options, such as by genre, release date, or popularity.
- Provide thumbnail images, video titles, and brief descriptions for each piece of content.

Video Upload:

Upload Functionality:

Provide an intuitive and user-friendly interface for content creators to upload their videos to the platform.

Video Metadata:

Allow content creators to add metadata, including titles, descriptions, genres, and tags, to help with content discovery.

Content Privacy:

Offer options for public, private, or restricted video uploads, enabling content creators to control access to their content.

Content Management:

Implement tools for content creators to organize, edit, and delete their uploaded videos.

Streaming Integration:

API Integration:

Explore the APIs (Application Programming Interfaces) provided by IBM Cloud Video Streaming. These APIs allow you to interact programmatically with the video streaming platform.

Notification and Alerts:

Set up notification systems to alert administrators or content creators about important events, such as content takedowns or user-reported issues.

Ad Integration:

If you plan to include advertising, integrate ad-serving platforms with IBM Cloud Video Streaming to insert ads into your content.

User Experience:

Progress Tracking:

Allow users to resume watching from where they left off, track their progress, and create watchlists to enhance their experience and ease of use.

Interactive User Engagement:

Integrate interactive elements like comments, likes, shares, and user reviews to encourage engagement and foster a sense of community among users.

Efficient Content Organization:

Categorize content logically and allow users to filter and sort content based on genres, release date, ratings, or other relevant criteria.

Accessible Design:

Ensure that the platform is accessible to all users, including those with disabilities, by adhering to accessibility standards and providing alt text, closed captions, and keyboard navigation.

Feedback Mechanism:

Collect user feedback through surveys, ratings, and reviews to understand their preferences and areas for improvement, ultimately enhancing the platform.

Ultimately, "Media Streaming with IBM Cloud Video Streaming" aims to create a user-centric and engaging multimedia streaming experience while simplifying content distribution and management, offering a reliable and feature-rich platform for both creators and viewers.

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