Video Streaming System

COS730 ASSIGNMENT 3

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User Manual

CONTENTS

OVERVIEW

The Video Streaming System is a software system that:

- ➢ Provides Video Content Publishers with a platform to share videos with an audience in a centralized way.

- ➢ Allows Audience Users to stream and watch videos shared by Video Content Publishers over a network.
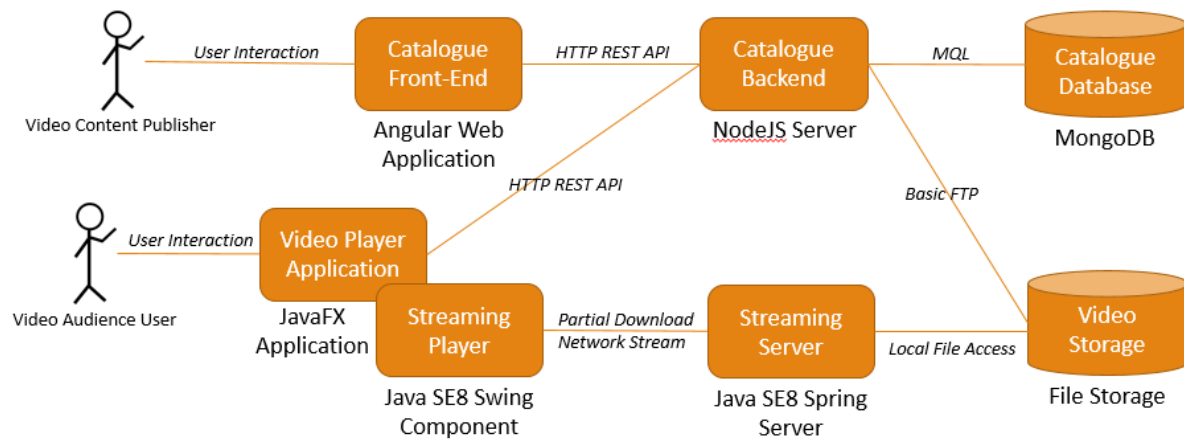
BUSINESS NEED

The Video Streaming System is a generic platform that can be sold, used, and re-used by different clients for an array of different applications. Example applications:

- ➢ Educational Institutions, where lecturers/teachers upload recordings of classes to be watched by students or pupils.

- ➢ Online Seminars or Digital Conferences, where speakers upload videos of their presentations for ticket-holders to watch.

- ➢ Entertainment, where licensed content creators can upload movies or TV shows for subscribed customers to enjoy.

etc. (Real-world examples include Youtube, Netflix, Udemy, Pluralsight, and many more).
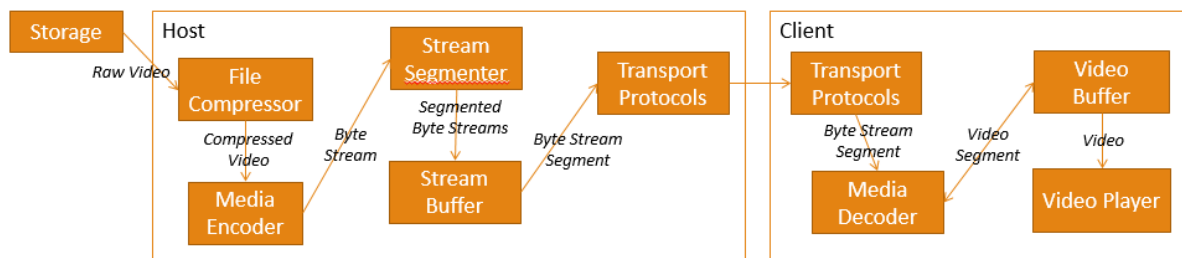
SYSTEM DESIGN

Component Layout

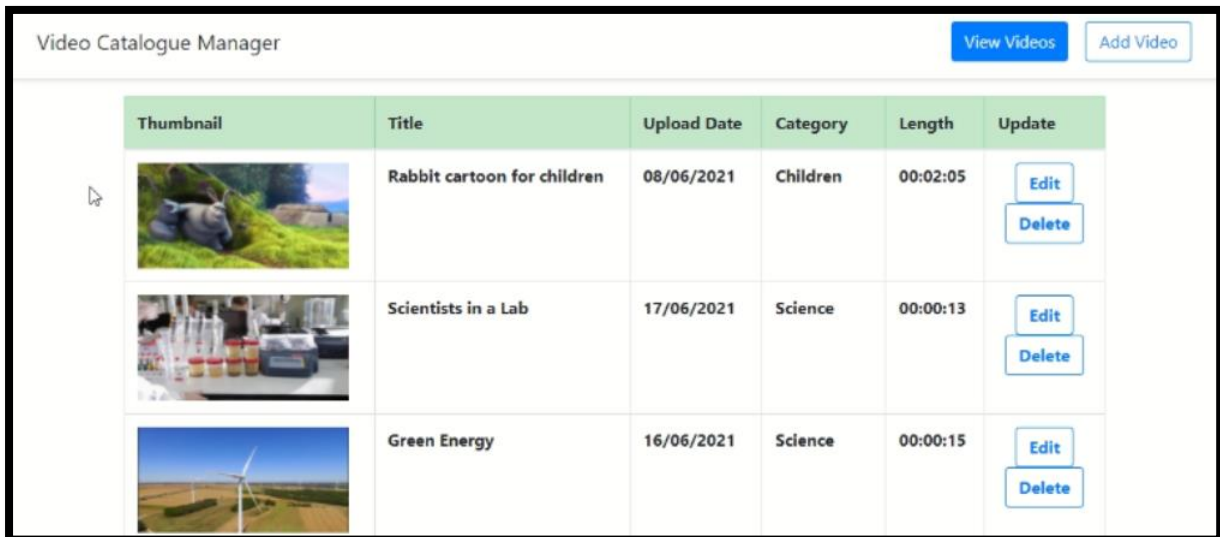## Streaming Mechanism

Commonly known as "streaming".

Technically referred to as "partial download" (or "progressive download").

USE CASES

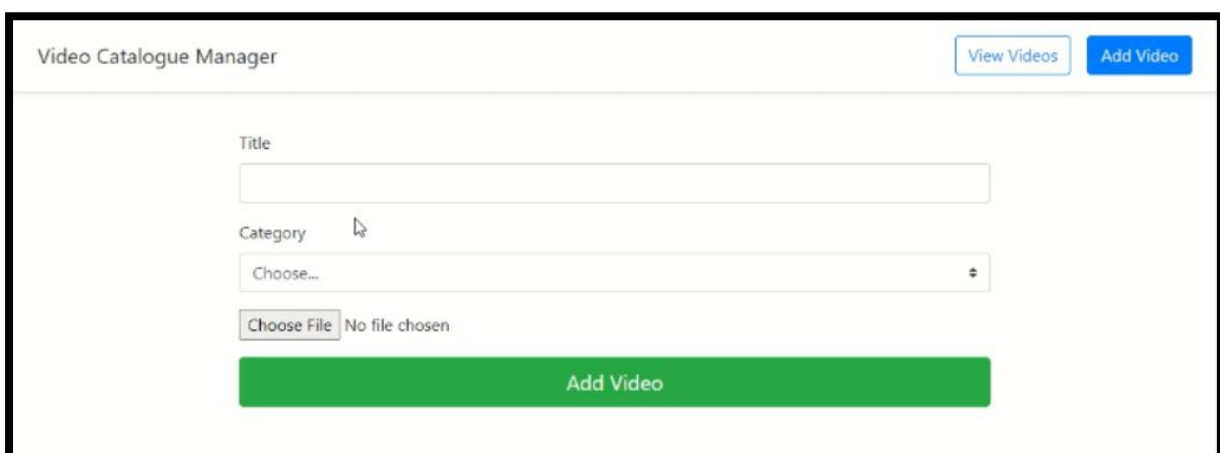## Video Catalogue Web Application

VIEW VIDEO CATALOGUE

- "Add Video" in the top right corner directs to a page where a user can add a new Video.
- "View Videos" always displays the Video Catalogue. If highlighted, the catalogue is being displayed.
- Each row in the table represents a video, showing a thumbnail, its title, the upload date of the video, and the playback length of the video.
- The "Edit" button allows a user to change the metadata of the existing video in the catalogue.
- The "Delete" button allows a user to remove the video from the catalogue.

ADD VIDEO TO CATALOGUE

- After clicking "Add Video" on the Video Catalogue, the page as shown above is displayed.
- The user must enter a title for the video, select a category, and choose a valid video format file from a file picker.
- If all inputs are not provided, the "Add Video" confirmation will result in a warning, and the video will not be added to the Catalogue.

EDIT VIDEO IN CATALOGUE

- After clicking "Edit Video" on the Video Catalogue, the page as shown above is displayed.
- The Title and Category fields are prepopulated, which the user may optionally edit.
- The user must enter a valid title for the video end select a valid category.
- The Video file cannot be modified.
- If all inputs are not provided as expected, the "Update" confirmation will result in a warning, and the video will not be added to the Catalogue.
- The metadata of the video will be modified on the Catalogue as indicated.

DELETE VIDEO FROM CATALOGUE
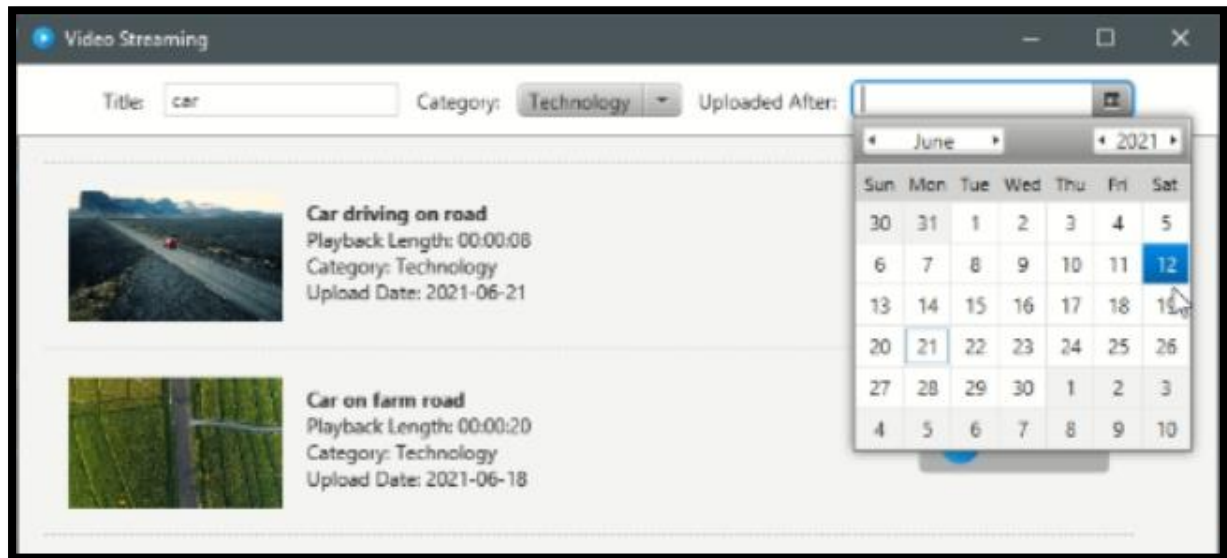
- The "Delete" button on the Video Catalogue table row allows a user to remove the video from the catalogue.
- Before a delete is final, a confirmation message will be presented, on which the user has to accept for the video to be deleted.

Video Player Desktop Application

SORT & FILTER VIDEO LIST

- At the top of the Video Player Desktop Application, there are 3 filters:
    - The 'Title' filter will filter all videos with the typed word in the title.
    - The 'Category' filter will ensure only videos from the selected category is displayed.
    - The 'Uploaded After' date selection will ensure only videos added to the system on or after the specified date is shown in the video list.

WATCH VIDEO

- Clicking the "Watch Now" button next to a video thumbnail and details will open a new window with a player on which the selected video will be streamed.

VIDEO INTERACTION

- The Video Player will automatically start playing, with the following 3 controls:
    - 'Play' – If the video has ended or has been paused, this can be used to restart or resume playback. This has no effect if the video is playing.
    - 'Pause' – If the video is currently playing, this can be used to temporarily suspend the playback until explicitly resumed. If the video has already been paused or stopped, this will have no effect.
    - 'Rewind' – Used to jump back a slight amount of time in the video.
    - 'Forward' – Used to jump forward a slight amount of time in the video.

STOP VIDEO PLAYBACK

- Closing the Video Player window automatically stops the Video Playback.