DEE Technology - Media Playback Engineering, Scale and Operations

Interview Candidate Assignment

Exercise #1: Take-Home Coding Assignment

Welcome to Disney Entertainment and ESPN Technology,

We'd like to have you code an implementation of a common use case in the Disney Entertainment and ESPN Technology, Media Playback Engineering, Scale and Operations group. Please use the following technologies to complete the exercise.

There are 2 parts to this assignment

API

1. Set up a database using the provided video files. This database does not need to be hosted anywhere.
2. Node.js
    a. Frameworks or libraries are not forbidden. If you use one, be prepared to discuss why
    b. There is no need to update the DB

Client Side App

1. Standard client-side web stack (HTML, JavaScript, CSS)
    a. HTML should be rendered on the client rather than server
    b. You may specify a specific browser that the app targets
    c. Use of 3rd party libraries or frameworks such as React or Angular is discouraged. We're interested in seeing how you attack problems in HTML, CSS, and JavaScript independent of a framework. If you choose to use a framework, be prepared to discuss why
2. Video playback using provided MP4's with an HTML5 Video Element

Although the assignment is fairly limited in scope, treat it as a feature in a larger, real-world application, where client-side architecture is important. Quality is more important than quantity, so good architectural and coding decisions are more important than adding extra bells and whistles. Once the assignment is complete, we'll review your work to assess the technical decisions made, and the completeness and quality of the work. Moreover, we'll likely review the implementation in an interview to walk through some of your thought processes.

Here's the assignment:

1. Review the requirements below and ask any questions you have.
2. Then, provide an estimate of time to completion. Please estimate both total hours, and the projected completion date
    a. Our intent is not to take too much of your time, so try to scope a solution that can be completed with a reasonable amount of effort
    b. In the interview, we can talk about anything you might do differently if given more time
3. Code the example. Feel free to ask any additional questions during this phase.
4. Provide the code for review, either on a code repository or by email, DropBox, etc.
5. Provide instructions for running the app
    a. The simplest instruction might be to provide a URL where the app is hosted
    b. Or, you may choose to provide installation instructions for running locally, including any build scripts if applicable

Requirements

In order to test our latest video player implementation, we'd like to create a simple test harness for our HTML5 platform that allows us to play test streams on a video player.

Related activities for this exercise:

- Create an api that retrieves the test files from a database.
- Update the provided HTML test harness app skeleton to list and play the video files.
- The test harness web page contains:
    - UI to present the user with a list of test streams that they can select to test in the video player
    - UI that presents a video player rectangle and relevant player controls that allow the user to play/pause and jump to a particular time in the video
        - Note: The primary focus is to create the UI that would host the video player and test streams, and provide a framework for allowing user player interactions.
    - Player Controls to implement as buttons independent of In-player Player Controls
        - Play/Pause
        - Seek (with TextInput for secs mark to jump to)
- You may alter the UI as you wish, but it is not necessary.

Details

App should load the available test streams using your api.

When the user selects a stream, it should be set as the stream or present the user a button to set the test stream on the video player.