Perfect Watch- A Netflix Clone

Abhishek Pandey, Lakshay Bhateja, Dr. Parampreet kaur
(Computer science and engineering, Lovely professional university, Phagwara)
(Computer science and engineering, Lovely professional university, Phagwara Gmail-)
(Lovely Professional University)

ABSTRACT
In this research paper, we tried to understand the working of Netflix, how it fetches the movies data and tried to build a Netflix clone using reactJS and TMDB API. We made the website using HTML and styled it through CSS. In this clone website, we have signup page, profile page. We can also fetch the details of any movie in the Netflix. It fetches the movies data from a third party API. It also has the trailer pop-ups.

I.   INTRODUCTION
Netflix is a subscription-based streaming service that allows its members to watch TV shows and movies without commercials on an internet-connected device. It uses the internet to stream movies and TV shows from our servers to the world wide web to your ISP's(Internet Service Provider).Netflix clone is a complete white label Netflix clone with a features rich and highly scalable website and mobile apps .Netflix clone is an on – demand video streaming platform similar to Netflix. Its helps you to start with your own video streaming platform then with Netflix clone you can get started with few days. Netflix clone offers a complete white label solution for an original Netflix.
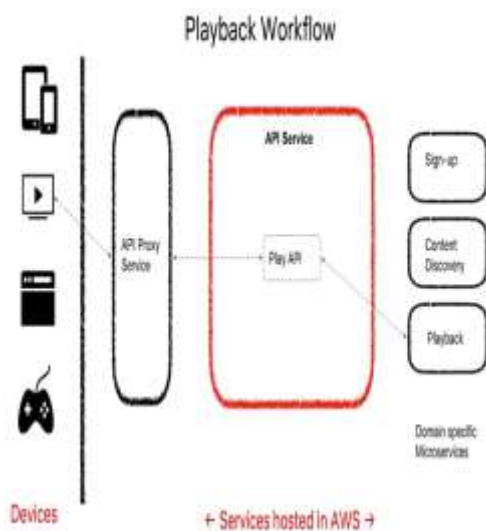

II.   LITERATURE REVIEW
Netflix is a very large entertainment company, the world's largest internet television provider. Netflix has almost 38 million members in 40 different countries. Over one billion hours of TV shows and movies are watched on Netflix every month, including Netflix's "original series"-original programs distributed by Netflix, such as House of Cards, Orange is the New Black, The Ropes, Hemlock Grove, and Shotgun Wedding. Netflix is available to the public for a total cost of $8.53 a month for either on-demand internet streaming or their DVD rental program. Netflix allows their members to rate and review what they have watched through their TV or on the Netflix website. Netflix uses these ratings to pair them with billions of other ratings from other members in order to accurately predict what type of shows and movies are also on Netflix that suit your personal interest. Netflix's content directory is divided into three different tiers. The lowest tier requires a

continuous downstream bandwidth of 1.5 Mbit per second and offers sound and video quality comparable to that of a DVD. The middle tier requires twice that of the one below it, at 3 Mbit per second, and this one offers quality that is superior to that of a DVD. The highest tier requires 5 Mbit per second, and offers 720p HD video with 5.1 and 7.1 surround sound, on select shows.

III.   PROPOSED FRAMEWORK

In this project, as this project opens up and loads on web page, therefore the web page consists of buttons for performing features of Netflix Clone, Netflix clone app exhibits the ability to upload chunk of audio and video content in bulk, concurrently transcoding, the entire content in an automated fashion! Now within a few taps, you can track, sort, and organize the content at its totality uncomplicatedly. Showcase the ideology of the entire video content in a single image with the capacity to create customized thumbnails. Now come up with terrifically personalized themes photos, thumbnails, actualized by this stunning feature.
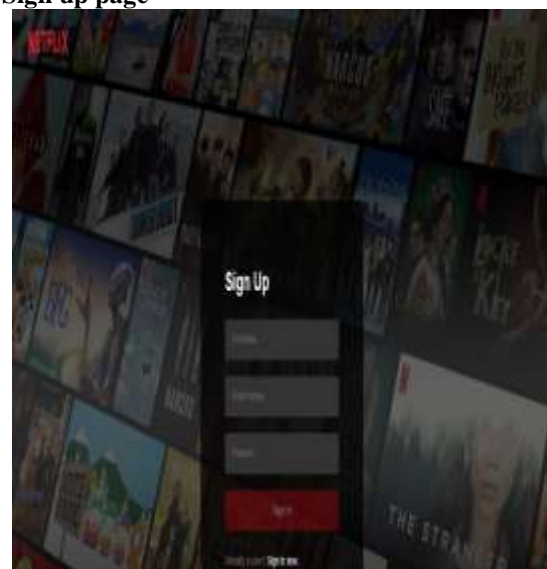

Playback Workflow

IV.   TECHNOLOGIES

Node.js-Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. Node.js lets developers use JavaScript to write command line tools and for server-side scripting— running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm, unifying web-application d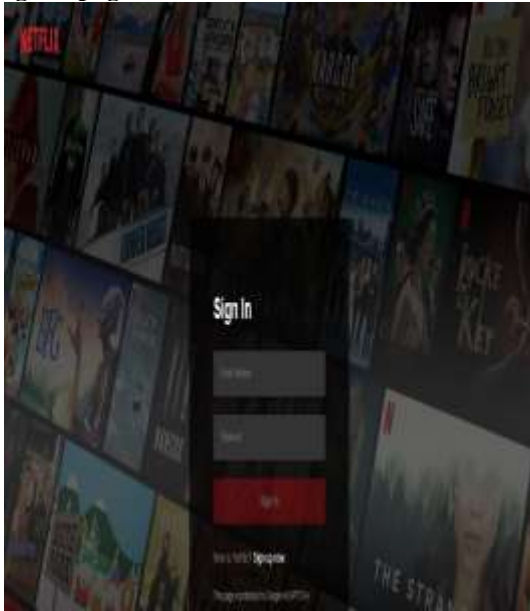evelopment around a single programming language, rather than different languages for server-side and client-side scripts. Though .js is the standard filename extension for JavaScript code, the name "Node.js" does not refer to a particular file in this context and is merely the name of the product. Node.js has an event-driven architecture capable of asynchronous I/O. These design choices aim to optimize throughput and scalability in web applications with many input/output operations, as well as for real-time Web applications (e.g., real-time communication programs and browser games). Node.js allows the creation of Web servers and networking tools using JavaScript and a collection of "modules" that handle various core functionalities. Modules are provided for file system I/O, networking (DNS, HTTP, TCP, TLS/SSL, or UDP), binary data (buffers), cryptography functions, data streams, and other core functions. Node.js's modules use an API designed to reduce the complexity of writing server applications.

CSS MODULE-A CSS Module is a CSS file in which all class names and animation names are scoped locally by default. By contrast, in a typical CSS file, all CSS selectors live in the global scope. CSS Module is a thin layer of abstraction that encapsulates new concepts introduced to the language. Consequently, CSS Module is written just like plain CSS

Screenshots of the Project-
Sign up page

Sign in page

.

V.   CONCLUSION

This is a clone of Netflix website built using React.JS as a Front-end & Firebase as Back-end. It's not a replica, and it doesn't have all the features of Netflix website. it's a similar version of Netflix with my own design touch, showing my abilities in React.JS to build something advanced like Netflix. It contains the home page, sign-in page, sign-up page, browse page, and movie player.