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Music/Podcast using React.js

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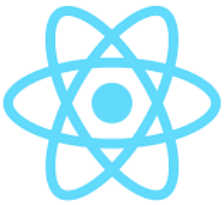
ABSTRACT: Front-end web development is the practice of converting data to a graphical interface,
Through the use of HTML, CSS, and JavaScript, so that users can view and interact with that data. React.Js is JavaScript library used for building reusable UI components. According to React official documentation, following is the definition React is a library for building compostable user interfaces. It encourages the creation of reusable UI components, which present data those changes over time. Many people use React as the V in MVC. React abstracts away the DOM from you, offering a simpler programming model and better performance. React can also render on the server using Node, and it can power native apps using React Native. React implements one-way reactive data flow, which reduces the boilerplate and is easier to reason about than traditional data binding. Music has been a way for people to reduce their stress and since we all have a variety of emotions, music comes in all type of styles. For music system, you need one app for sound equalizing another for video streaming of songs and many others. Our idea is to integrate all these into a single one, which would be a boon to the music lovers.

KEYWORDS: Music, Web-development, React.js

I. INTRODUCTION

React is a popular open source front-end JavaScript library developed by Facebook. React is widely popular among developer communities because of its simplicity and easy but effective developing process. React makes it easier to create interactive user interfaces. It efficiently updates through rendering the exact components to the view of each state and makes the data changes in the application. In React.Js, every component manages their own state and composes them to the user interfaces. This concept of components instead of templates in JavaScript, plenty of data can easily be passed to the app and thus keep the state out of the DOM. Using Node React can also be rendered on the server side. Alongside web apps, to build mobile applications we can use React Native as well. The purpose of this is to carry out an in-depth research of the React.Js library based on JavaScript. The fundamental concepts, characteristics, features, development processes, core architecture and market research as well as compatibility will be covered in the thesis. The aim is to provide a solid understanding of the React.Js library.



- **How does it work?**

React creates a virtual DOM which is kind of a replica of the actual DOM. When there are any changes to be made in the actual DOM react smartly makes those changes in the virtual Dom first and carries out a diffing mechanism to find the difference between the incoming changes that is present in the virtual Dom and the current Dom. Once the differences are identified, only the differences would be updated in the DOM. This makes react super-fast and efficient too since only the required changes are applied on the Dom and unnecessary Dom manipulations are avoided.

II. PROPOSED SYSTEM

Our system provides the relevant information regarding all the songs, podcasts, playlist, albums available in real time. Generally our project is operated by user manually so they get overall control over all the features and programs provided in the Music/Podcast Player. When the Project Starts the user lands on to the home screen where everything is simplified in a proper manner, regarding Top Charts, Latest Hits as well as the trending music. We have made used of HTML Audio Tags as well some function to make sure the proper song is played. After the playing the song/podcast the user can

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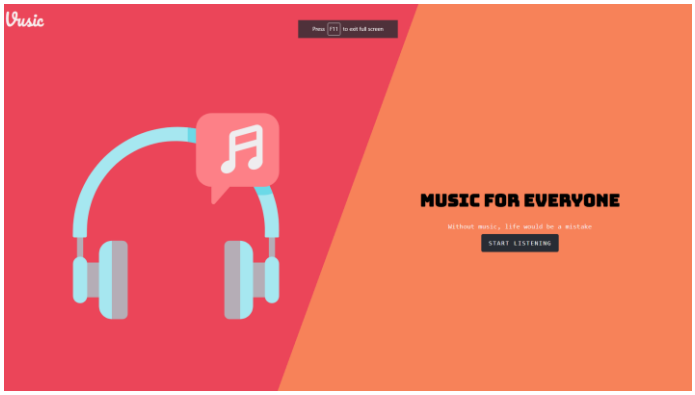
navigate through the whole music with the help of progress bar of the song/podcast which is currently in play. If the user wish to go to next track there are control to navigate through songs. If the Volume is too high the user can adjust the volume manually according to his preference. He can watch the name of album or the song if user wish to save it he can do it.



How our system is different from others:-

There many projects that have been implemented for creating a music player, but HTML, CSS and JAVASCRIPT is not the only thing, We have used React.JS which is a advanced JavaScript library proposed by Facebook and has the most biggest community in the market.
React is simple yet powerful and is way much better in its game when compared to other frameworks like Angular, Vue, etc. This music player contains Sass which is a preprocessor scripting language that is interpreted or compiled into Cascading Style Sheets (CSS). The better usability features of the project shows us a clear picture of how the music player must be used!

Our System will show the following:-

- Availability of new songs at your fingers!
- Good sound/music quality.
- Customizable playlist, albums and songs.
- Know the name of artists/creator.
- A good navigation bar to navigate between different options provided in music player.
- Has a shuffle feature for your sudden mood swings!

III. CONCLUSIONS

- We have successfully developed and implemented a music/podcast app using react.js that gives quality of output of songs to users.
- It is user friendly, easily installable, easily accessible and can be used for various other purposes.
- Music player system realized the basic function of player: play, pause, and stop, up/down a, volume adjustment, lyrics display, play mode, song search, file browser, playlists query, and other functions.
- We are still working on the possibility of improving on the system to add some new artist's songs, add a new song easily, feedback option etc.
- This will helps people to listen best quality of songs easily anytime & anywhere in mobile phone or in desktop.

IV. FUTURE SCOPE

- Helpful for Students, Employees and workers who can enjoy listening to songs while working.
- People who are hospitalized with some mental health problems can you use it as a therapy and some motivational content.
- People can enjoy songs while they are driving or on a journey. As music creates a vibe.

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