Discovery of Acoustify

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ABSTRACT

Entertainment is one of the important aspects of our lives. Entertainment comes in many forms and everyone has their own choice to decide which is a better option for them. Listening to music or radio is one such form of entertainment which offers the kind of relaxation you need. It lowers your stress levels, therefore, improving your mood. If we can immerse ourselves in our favourite music with enhanced listening experience, then users would be in complete awe of such an application. Acoustify app is an app that is used to achieve this objective. With Acoustify app, we can extract the streaming URLs embedded in a particular website using the URL of that website. By this we can get the audio streamable URLS from that website, which can be processed further for enhancement of user's listening experience.

Keywords— *Streamable URL, Acoustify App*

1. INTRODUCTION

In today's competitive world, there are several apps that are getting released on app store every day. Audio streaming apps are no exception to this. Apps these days are having several unique features to attract customers. Enhancing the audio using various filters is one such feature. In order to apply any effects, we have to get the raw audio files or streaming URLs. This job is done by our Acoustify app. Acoustify app is primarily a combination of stream extraction and a stream player with enhancer. This app not only extracts streams from a website but also provides an option for users to play those streams on an audio player with enhancer. It not only allows the user to listen to the radio stations but also it has the feature that allow the user to search for the song that he /she likes by giving the song or movie name and play the music in player facilitated with enhancer that is boom-effect. Here the main working of app is to get the streamable URL from the specified sites source page and if the site has streamable URL then the URL will be extracted from the page source and can be played here. With bass booster, it completely changes the way you listen to your favourite audio. On any headphones, you may enjoy the magic of 3D surround sound and feel your music come to life. For easier access of users, the app also provides a set of sample stations which are guaranteed to provide a list of streams that are playable. This app has most of the features of any typical music player or radio player app to provide good user experience. It stores the recent plays and also has the option to store the liked station or song in the favourite list which will help the user to play those stations or songs just by going to the favourite list in the future.

2. LITERATURE SURVEY

Audio is garnering new renewed interest as mobile listening grows and on-demand technology in the car interrupts linear audio listening. Present system consists of database or serve storing the audio files which gets retrieved dynamically when user chooses to play the audio. These audio files are not raw files so any kind of filters cannot be applied by external enhancer. The extraction of URL or audio files is carried out dynamically by the system when particular audio is chosen to play by the respective user. This system requires a good storage memory for storing audio files. This system requires a good storage memory for storing audio files. These systems may include encrypted DRM methods designed to work over the present analogue radio broadcasting frequencies, such as AM and FM broadcasting, so they can't be played with anything else.

3. METHODOLOGY

Although many stations stream their broadcasts from their own websites. It's easier to use a streaming radio app that can access feeds from multiple radio stations. Similar to this app there are few apps which streams live broadcasts from various radio stations but this app includes an equalizer function which will make the audio clearer and provide more quality.

The proposed system features scraping the website to extract the streaming URLs, display the streaming URLs in device friendly format and provide the option for users to play it using boom player. The proposed system allows users to access sample sites which contain 3 different sections namely radio stations, podcasts, music sites streaming all over the world. When user selects a particular site from the available list, system uses the URL of that website to fetch the source code for further processing. A general regular expression is used to all types of

URLs embedded in the source code of that website. Since URLs that are of interest to users are only the ones that are playable, Media Player is used to filter out the streaming URLs (both live and non-live) from the available list of URLs. These playable streams are displayed to the user in the list format. Clicking on any streaming URL enables the user to the audio being streamed on that URL. The user can also browse through various websites on internet inside app using the search option provided and try to extract streaming URLs. Anyone can read the source code, which is the programming supporting any webpage, using a variety of tools, including a web browser. On Android or iOS phones, this is a little more challenging. Acoustify which is an android app successfully accesses the source code of any webpage and initially lists all the absolute URLs present in that website those of audio matching a regular expression. These URLs are then displayed which are playable using a player. This app can also be used to extract the streaming URLs directly given the website URL. It accesses the source code of website and displays all the URLs including those of images, audios, videos etc. using general regular expression. These URLs are then filtered to extract only those URLs that are playable using an audio player. Each URL is passed to an audio player and its status is checked. If the status is 'loaded', this means that particular URL is playable and is filtered out from rest of the URLs. This whole process is repeated until all the URLs present in a website are parsed. On completion, user will be provided a list of audio URLs that are playable.

With regard to the music, whenever the user searches for any song by giving the song name or movie name, it generates a url for a particular music site i.e. pagalfree.com based on the given condition which then extracts the streamable url from the generated music site link and returns it. In the absence of playable streaming URLs, user will be provided with suitable alert message. This system also allows the user to like the particular station which gets stored and displayed in favorite list. User can also delete the liked station from that list. It also allows the user to listen to recently played station which is displayed under recent list.
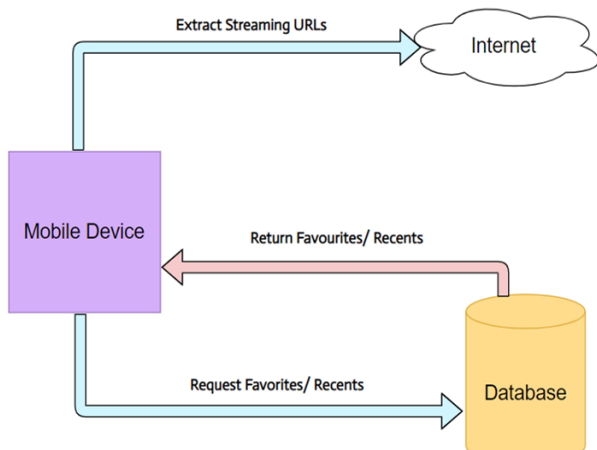
High Level Design Architecture

If the user wants to listen to any other stations, apart from the stations provided in the home page, then he / she can fetch the streaming URL of such stations either by giving the official website URL or by searching from the google from the app itself, which later extracts the respective URL and plays for the user.

For any song searched by the user, along with the URL it also returns other information related to the song like album, lyricist, music by, star casts etc.
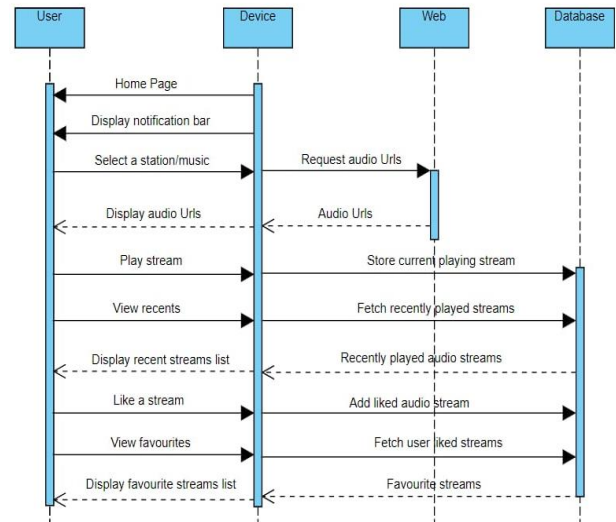
Sequence Diagram of Acoustify app

General regex pattern used for the extraction of streamable URL for the radio stations :

"(https?://)[-a-zA-Z0-9@:%._+~#=;]{2,256}\\.[a-zA-Z0-9()]{1,6}\\b([-a-zA-Z0-9()@:%_+;.~#?&/=]*)"

Input- Desi Radio :
https://www.desiradio.org.uk/live3.html
Result - Streamable URL :
http://desi.canstream.co.uk:8001/live.mp3

This is the streamable URL that the app returns which can be later played with the enhancer and also can be shared using any messaging apps. When it comes to the music part, as mentioned above with the given song or movie name it generates a link automatically as shown below:
user search : JEENE LAGA HOON
link generated by the app :
"https://pagalfree.com/search/jeene%20laga%20hoon"
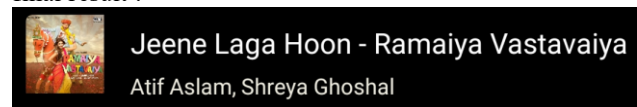
final result :

User can start playing it just by a clicking on the result.
User search : Dilwale
link generated by the app :
https://pagalfree.com/search/dilwale
Here since the name entered by the user is a movie name, it lists all the songs from the movie dilwale as shown below

Final result:

As mentioned earlier, the unique feature about the app is it completely changes the way that the user is going to listen to any of the audio by applying various effects to the player like 3D surround, 3D Speakers, bass booster and also has the various equalizers so that the user can listen with any of these as per his/her needs. The app also has the option to listen without any effects just by switching on and off the boom toggle button.

4. CONCLUSION

This app, 'Acoustify' is being developed with the main focus on playing streamable URL from any given site with the special enhancing effect, so that the user may enjoy the magic of 3D sound and feel the music come to life on any headphone. The application is successful in playing the given site streamable url with the enhanced 3D effects. This app combines the unique feature of listening to both the radio stations and the music just by search and play.As this application is an entertaining app, it can be used by the people of any age, anywhere.

5. REFERENCES

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