

**Undergraduate Final Year Project Proposal**

**Use of NodeJS, ReactJS and MongoDB to build a music social website**

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As for my project, I have researched and applied NodeJS and ReactJS to develop a social networking website about music. However, I found that the website still has some shortcomings and many unfinished points. I always try to absorb the comments of the teacher and everyone to complete the project as much as possible.

**Abstract:**

The current technology era does not only exist in developed countries but is present and indispensable in most countries around the world. Websites for sales, learning, travel, services, and so on are all being developed very strongly in order to improve the quality of life as well as serve to transfer information, material and importantly, the spirit of customers. everyone. Most people nowadays have hobbies, own a personal account on one or more social networking platforms for their own purposes such as Facebook, Instagram, TikTok, Twitter. People can do business through the promotion of product information, forming a group about sports, entertainment, certain travel services that are collectively known as sharing and promoting personal information or an organization. some. That shows that the benefits that social networking platforms bring are huge.

However, besides the benefits, there are also limitations that the platform brings to today's society. The negative things, depraved images, violent and extremist videos that many people propagate through electronic devices are widely disseminated. Especially children, immature age will not have enough knowledge and experience to filter content with bad nature and behavior. Therefore, I decided to create a website about music as well as create an environment that allows users to interact with each other in a civilized manner and limit negative, pessimistic or degrading images and videos. depraved. About the music will be managed by myself and added to the website, users can listen to music and share their feelings in a healthy way. Moreover, users can also download to their devices to listen when there is no Internet connection.

Node JS and ReactJS are applied by me to this music social network project. They are all JavaScript libraries, so synchronizing and combining them in this research will make it easier for me to create a better optimized website. In addition, using a component in ReactJS multiple times will help me develop and improve the system smoothly, easily and save more time. NodeJS again helps me receive and process information from one thread, convenient for system maintenance and update. Therefore, optimization and synchronization are two advantages of ReactJS and NodeJS for me to make the decision to apply them to my music website project.

The later improved system promotes the advantages and improves the shortcomings of the previous system. Because of that, I will constantly research and learn to improve this website in order to bring a social networking platform, a civilized environment, and actively serve the spirit and entertainment of users. I guarantee that I will not allow information, images, videos that are culturally, ethically, or unhealthy to enter my system. I myself will manage and prevent those things to contribute to creating a good environment on my own website.

**1. INTRODUCTION**

Link code of my project:

* 1. **Overview**

In general terms for everyone to understand, my project is a product based on research on allowing users to post, share status with the song they want. Most of them will be limited in features compared to other social networking platforms, especially Facebook and TikTok. Closer to my project is ZingMP3, it allows users to post images, videos with music, but a certain part of users have taken advantage of this and shared unhealthy information. Therefore, I will encapsulate the website in allowing users to only post text and paragraphs with their music. Music is the melody that helps us humans feel more colorful and interesting life. It helps the brain work faster and more efficiently as well as can help reduce stress after work, stressful things of people. Since then, the risk of cardiovascular disease and blood pressure is significantly reduced. Imagine that, a morning will be full of energy if we enjoy joyful, dynamic songs and music. Sleep is deeper when the music is slow, calm.

Therefore, why don't people share with each other about music with cheerful, positive or slow, peaceful melodies? Of course, accompanied by words to share, expressing my mood when listening to this song with everyone. It's also a way that people with understanding tune into the same tune to understand each other's feelings and also contribute to the good of society. All of the above is what I wanted to show through this project. Users can also change personal information and add favorite songs to their own playlists.

In terms of technology, NodeJS and ReactJS are two large libraries commonly used by programmers today using Javascript technology. I apply both to the process of creating and developing this social networking website project. Moreover, MongoDB, SASS, Redux and React Hook databases are also implemented by me along with the above 2 main technologies. In any project, the time factor is extremely important and key to evaluating the completion of a certain product. People need to find ways to both save time and develop and optimize them. Therefore, my solution is to choose 2 languages ​​Front-end and Back-end using the same technology. Corresponding to them are also NodeJS and ReactJS also use the Javascript library. Virtual DOM technology makes it possible to make a small change, but there is no need to call back the entire data to run the page again. That also helps optimize website loading speed as well as help users feel a smooth experience on the product.

* 1. **Purpose**

In addition to the great benefits that social networks bring, there are also limitations that need to be mentioned are fraudulent personal pages and organizations along with violent and negative images and videos in general. is unhealthy. With my wishes, I will directly manage with admin rights to filter and delete posts of negative and extreme nature. Although researching and implementing the project with one member is me, but in terms of technology NodeJS, ReactJS and MongoDB are widely popular, which has helped me to refer to the research materials of my friends, teachers, and students. the forerunners as well as the community using this technology. This project will be implemented from January 15 to November 20, 2022.

* 1. **Scope**

With the research and development of the website with only one member, me, one function will be limited or incomplete. Users can register personal information including name, email, password, profile picture, ... and can also modify their own information. In addition, people can post with the song that the admin uploads to the website's database. Their posts will be displayed on their Home Page and profile. Of course, if people like a certain song, they can add it to your own favorites list.

Regarding the chat and messaging functions on the website, I think a music website doesn't need it. Currently, many other platforms allow users to share, chat privately with each other or in a group. Users using those platforms to chat have become their own habits. Moreover, my project focuses on listening to relaxing music or bringing positive spirits to people, so this chat function will not be available. People using the website have seen each other's shares through the Home page. While working on the project alone will be limited in functionality, I aim to bring out the best in this project with my abilities.

**1.4 Organization**

For a more detailed report, I will give an overview of specific sections to make it easier for people to understand my music website.

Section 1: Overview of the project and the purpose of creating a music website.

Section 2: Giving some objective views on the popular social networking platforms today. From there, overcome the limitations and promote the advantages to promote the completion of the website.

Section 3: More specifically about NodeJS, ReactJS and some other technologies applied to the project.

Section 4: Specific analysis of the requirements of the website.

Section 5: Website design based on the referenced documents.

Section 6: Illustrating and applying technologies and libraries to the project.

Section 7: Check and provide the limited functions, shortcomings of the project and the plans for the functions that can be added to the website in the future.

Section 8: Conclusions and References.

**2. LITERATURE REVIEW**

Until now, the development of the economy of most countries in the world has been their top goal. However, in the ages there will be their own booming economies. In the years of the 19th and 20th centuries, the oil and mineral extraction industries, collectively known as heavy industries, developed strongly. Similarly, the 21st century is now a digital boom. Especially social networking platforms are widely used by people to share information, chat with each other and even serve their business and entertainment needs. The two most popular platforms today that I want to talk about are Facebook and TikTok.

Facebook in the early versions with their purpose is to share information, post lines about their own status through connecting with many other people. It is collectively known as a community of users to share feelings and especially chat with each other only needing an electronic device that can connect to the Internet. To improve the Facebook platform up to now, I want to talk about the other big functions which is advertising and watching long videos. According to statistics as of October 2022, monthly active Facebook users amount to about 2.93 billion people, equivalent to nearly half of the world's population using Facebook (Smperth, 2022). That shows the popularity of this social networking platform for many people. Only after Google and Youtube, it is ranked 3rd in terms of worldwide visits. The next platform I want to talk about is TikTok, its main function is to help users post videos of certain individuals or organizations with captions to share for everyone to see. Currently, it has also added a sales function on the TikTok shop or can also livestream for its own purposes on this platform. According to the latest statistics, there are about 1.2 billion people active on this platform since April 2021 (MANSOOR IQBAL, 2022). The above 2 platforms show that the entertainment demand on social networking sites is extremely large for most people in the world. However, the proper use of these entertainment platforms needs to be communicated to everyone. They have unique, brilliant images or videos that attract viewers. That's a lot, if people overuse them, it will create a passive life. Wasting time all day lying, sitting or even everywhere, all the time for surfing social networks to see bullshit news, useless to people. With the current situation, social networks have also affected many people. They can be mocked, provoked, verbally attacked leading to mental loss. Product promotion is also very popular title in these platforms thanks to the large number of users. Untested products are promoted that users cannot clearly identify it just through pictures, videos and words. Therefore, today's social networking platforms are not only dedicated to entertainment but also integrate more areas of business, services, livestream, etc... The integration leads to many very complicated problems today. through some of the restrictions I outlined above. Therefore, I have researched and created a music website to serve everyone's entertainment needs with the aim of limiting the shortcomings I have presented.

Music is a spiritual food that I think is indispensable in life. It helps the human brain work stronger, more sensitive if the right genre and melody from the music. For example, a stressed person needs to listen to soothing, relaxing music to relieve stress on the brain. There are people who will listen to upbeat music to bring positive energy for an energetic day. In general, music for human entertainment, if selected, will be extremely useful for work and life. Even in battle, there are eloquent songs to boost the soldiers' morale. That is also an important reason that motivates me to complete a music website. I think if accessing social networks just to see pictures and videos, the brain will only focus on those things and can't do anything else. Therefore, I think music can accompany people in both work or relaxing moments. People can also share emotions through music that creates human-to-human connections. Good music with words to share your mood, feelings or story with everyone. There, people will find sympathy, we can also hear other good music from everyone. Based on that need, I have created a function that allows users to add or remove favourite songs from their own playlists. The songs in the database will be selected and added to the website by me. Users can only listen to those songs and of course I will guarantee the culture that the song refers to. The tracks with the post will be visible to everyone and in their own profile. I want to prevent people from scrolling through photos, videos, or other work distractions or even bringing unhealthy cultures to social media. Therefore, with admin rights, I will delete posts of an unhealthy nature to contribute to creating a social networking site that not only serves entertainment needs but also has a humane nature.

3. TECHNOLOGY

3.1 SCSS

3.2 Javascript

3.3 ReactJS

3.4 NodeJS

3.5 MongoDB

3.6 React Hook

3.7 MERN Stack

4. REQUIREMENT

4.1 User story

4.2 Use case





















