GIGAPP: An App Built Exclusively for Gig Lovers

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Abstract - **For any artist it is so important to have the right people as their audience to express or showcase their talent. There are multiple Social apps already available on Internet like Facebook, Twitter etc but they don't guarantee the reach of correct audiences to their gigs. Hence, the proposed project aims at developing a mini social network app for all the gigs lovers who loves to track gigs of their favourite artists and follow them as well. Along with the users, an Artist will also be able to announce their upcoming gigs and will have a greater reach of audience as this app will be built on functionalities that will help them to segregate users as well as artists according to their preferred genre. This project is going to be developed using Microsoft's ASP.NET technology which is an open-source development platform and C#, which is a simple, modern, object-oriented programming language along with various front-end technologies like HTML, CSS, JavaScript, Bootstrap etc. Technologies like Entity Core Framework is used to connect the application with the database.**

Index Terms - **Web development, ASP.NET, C#, Application.**

I.INTRODUCTION

There are many web development technologies available today which makes the process of building apps very much efficient. Microsoft's .NET technology is a software framework which includes a large collection of libraries also known as class library and provides support for multiple programming languages such as C#, VB.NET, F# etc. The execution environment in .NET framework is maintained by the CLR, known as Common Language Runtime. The CLR is responsible for managing memory, handling exceptions and taking care of security of the system. .NET Framework is collectively formed using class library and the CLR.

Currently there are two variants of .NET:
1. .NET FRAMEWORK

2. .NET CORE

.NET framework is used exclusively for windows platform whereas to build cross platform applications, we can use .NET core which is supported by LINUX, MAC and WINDOWS.

The proposed project aims to use .NET Core to build the application primarily to make it portable. C#, which is a programming language supporting objects and classes, is used to write the functionalities of the applications.

Following are the functionalities which can be carried out by a use in GigApp:
1. Login and Signup using JWT authentication.
2. Gigs related activities (Search, Display, Add, Update)
3. Follow
4. Sign out

II.OBJECTIVES

To develop a mini social networking app exclusively for gig lovers. The applications will contain the following as end-users:
1. Artist
2. User

III.PROBLEM WITH EXISTING APPLICATIONS

1. There is no app built specifically for gig artist and users who loves gigs.
2. Social media apps do not guarantee reach of correct gig audience.

IV.LITERATURE REVIEW

1. In this paper, the author talks about designing a bus tracking and fuel monitoring system using ASP.NET MVC.
2. This paper aims at discussing and developing system covering all the aspects of supply chain / logistics management using ASP.NET.

3. According to the author, the main objective is to develop a site where farmers can directly interact with government to seek help for their problems.

4. In this paper, the author conducts a research on the design and implementation of computer network virtual laboratory using ASP.NET technology.
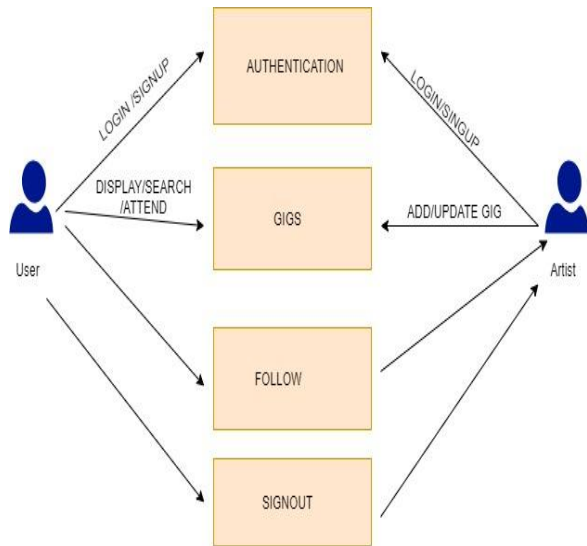
V. PROBLEM STATEMENT

There are many social applications available on internet today, but not a single app is built exclusively for Gig Lovers.

VI.SOLUTION

Using ASP.NET, an app can be built exclusively for gig lovers which will solve all the existing problems with other social applications.

Because of its cross-platform nature and open-source capabilities, ASP.NET Core is very much efficient to be used for developing any kind of applications.

VII.SYSTEM ARCHITECTURE

USE CASE DIAGRAM

Fig 1: Architecture of Gig App

7.1 Modules used in the system:

1. Authentication: User/Artist can sign up to the application and is differentiated based on their roles. JWT authentication techniques is used to generate web tokens and authorise users based on their roles.

2. Gigs: An artist have the privileges of adding a new gig to the feed or update and existing gig. A user on the other hand can view all the upcoming gigs, search a gig based on their interests such as genre, or venue.

3. Follow: Each user can follow any number of artists they like

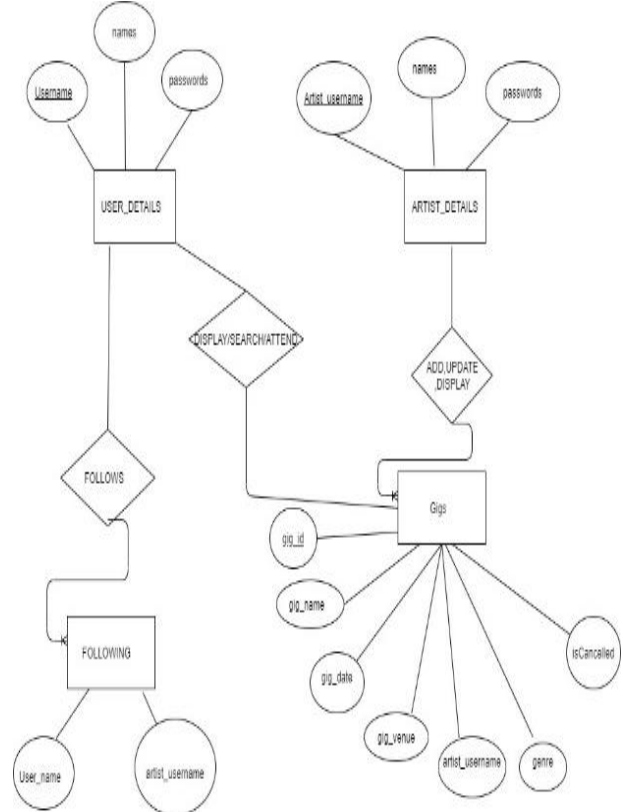4. Sign-out: An artist or a user can also sign-out of the application.

Fig 2: ER diagram

7.2 Entities used in this application:

- ArtistDetails: A table containing artist user id, name and password.

- User detail: A table containing user credentials.

- Gigs: This table consists all the details of a gig like its id, name, name of the artist who is organising it, location of the gig, date and also records the details if the gig has been cancelled. It refers primary key artist user id as foreign key in its table.

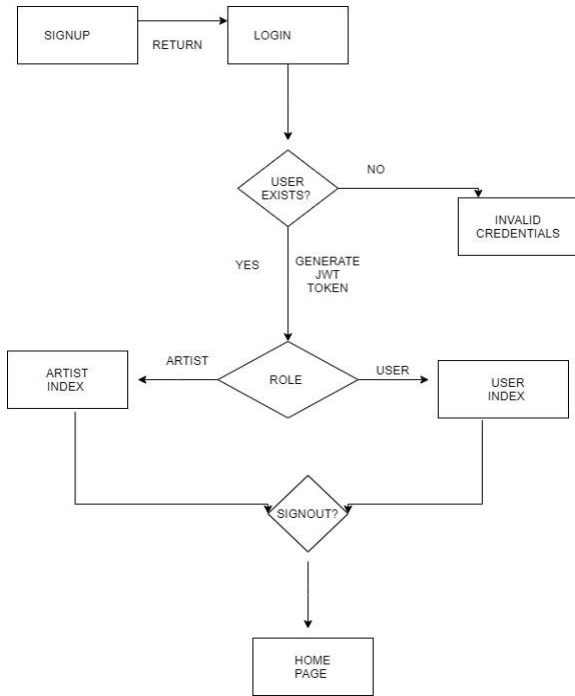- Follow: Contains details of all users following the artist they like.

Fig 3: Flow chart of the system

Working of the system:

A user can sign up to the system. On successful sign up the page will be redirected to login page. On successful validation of user while trying to login, a JWT token will be generated which will authorise the user to have access to functionalities they are allowed to be based on their type of role – user or artist.

An artist has all the permission to add a gig, make changes to existing whereas a user can also view and search for gigs and follow their favourite artist.

While signing out from the system, the page will be redirected to the home page.

7.3 Technologies used:

a. ASP.NET Core: framework used for developing the application.
b. Entity core framework: Used for database connectivity.
c. SQL Server 2019: Used as the primary database
d. Visual Studio 2019: To write, compile and execute the code.
e. ASP.NET MVC: to decouple User Interface from business and application logic.
f. Front-end: HTML, JavaScript, CSS used for designing.

VIII. FUTURE ENHANCEMENTS

1. Can Implement ML techniques to implement Recommendation system
2. Can Deploy it in cloud to make it more scalable

IX.RESULT

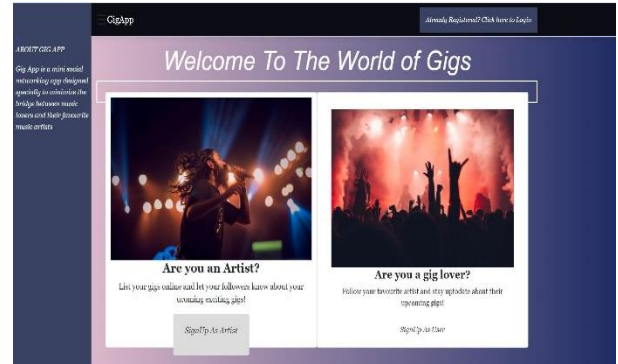Some of the snapshots of the proposed system is as follows

Fig 4: Home Page pf Gig App

The home page of the application contains signup and login options for both artists and users.
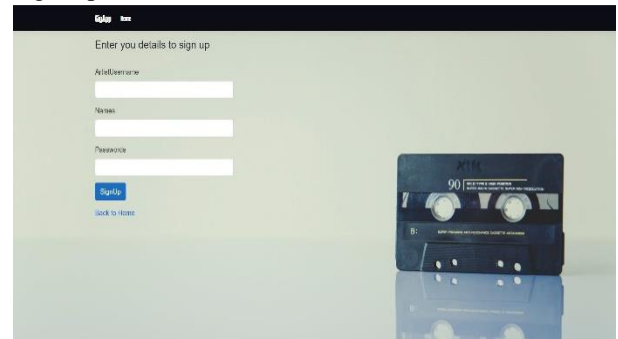

Fig 5: Sign-Up Page

A user or an artist can register to the application using sign up option. On successful sign-up the page will be redirected to login page.
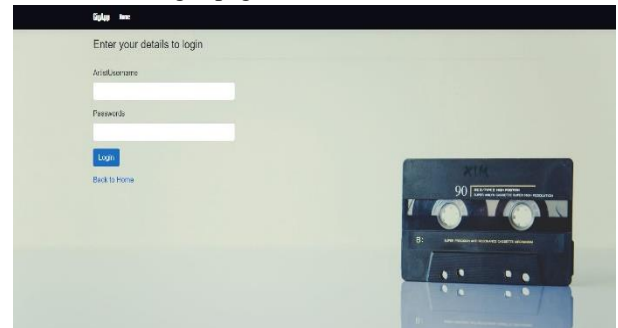

Fig 6: Login Page

On successful login token will be generated and based on the user's role they will be redirected to their respective feeds.
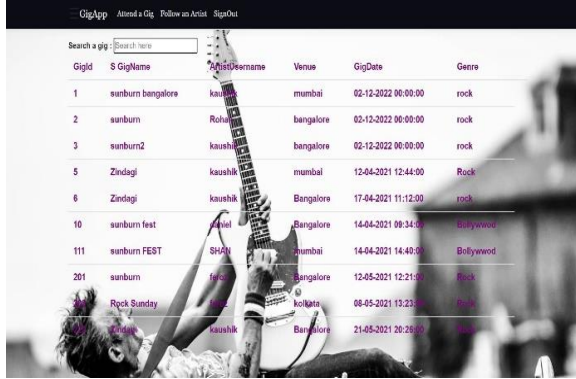
Fig 7 : User Feed

Once redirected to their respective feeds, users can perform operations such as adding gig, searching gig etc based on their roles.
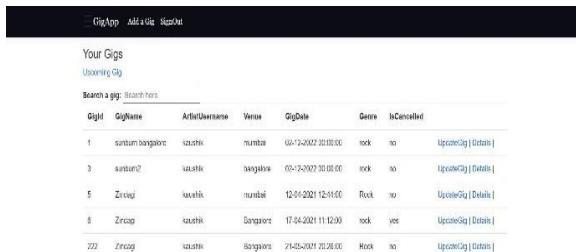

Fig 8: Artist Feed

Artist can add, view and update a gig on their feed

Fig 9 : Authentication testing in Swagger UI

Before creating MVC, functionalities are tested in Swagger UI. Users need to login in order to have authorised access to specific actions

Fig 10: Token Generation

After successful login, bearer token is generated using JWT which is used to authorise users.

Fig 11: Authorization

Enter the bearer token generated to authorise.

X.CONCLUSION

We can efficiently build any kind of web app using .NET technology.

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