INTRODUCTION

As for this project, a cloud-based metadata extraction and search application, our group will be planning to make a MP3 music searching website. Through our music website, users can perform functions such as searching, browsing, and sorting. It provides a platform for the user to conveniently search for music he wants by just entering the artist name or song title etc.   For example, when a user wants to search for a certain song, he or she can easily search by giving the artist name, song title, year, title, and genre of the song through using our website.

PROBLEM STATEMENT

The project can be divided into two parts- back end and front end (i.e, user interface). The objective of the backend is to the store mp3 files in the cloud database and write a function to extract and store the metadata in a nosql database. The front end aims to provide an interface which displays the files that match with the user's search query. Facet searching will be handy in our website. We will classify the data by the artist name, song title, year, title, genre and other categories if needed, so that users can do facet searching easily through our website. At the same time, users can search accurately based on keywords and get all the metadata and file links along with the songs in the results. If time permits, we may also want to make an application compatible with phones.

GOAL

The goal is to equip ourselves with the skill and knowledge to successfully implement the project. It includes, learning firebase and cloud functionalities, writing efficient python code, learning to design a working webpage and integrating it with firebase.

METHODOLOGY

The project involves the following steps :

1. **Obtaining the files**

We wish to obtain mp3 files from our own music library and upload them to the google cloud storage.

2. **Extraction of metadata from the files**

Metadata is a set of data describing data in a file. In this case, metadata associated with the mp3 file is artist, album, genre, title(of the song). In this step, a python function is written to extract this metadata from the files.

3. **Storing metadata in cloud database**

In this stage, the extracted metadata is stored in a cloud database with the help of a python code. This project will be using a noSQL cloud database from google called Firebase.

4. **Creating a User Interface**

We wish to create a web page using HTML, javascript, CSS and Angular JS that allows the user to search for songs based on two types of searches, namely-keyword and faceted search. The file/files whose metadata matches with the user's search query will be displayed along with the file's metadata. Additional feature to play the audio file displayed in the results will also be provided for the user.

MILESTONES