The purpose of the website is to categorize popular music and show where a musical artist will be. The website will sort the music into several different categories, or “pillars”. The pillars of the project are artist, venue, popular songs, location of origin, and year the artist started producing music. The website focuses on allowing the user to connect with the music they love by connecting the user’s choice of music with any popular music venue that their favorite artists will be performing at.

Once a user selects an artist, song, venue, or decade, the website will then provide a deep dive into the selected option. This will give the user a better insight into the music they love, while also providing them with the information they need to see their favorite music live and in person.

For example, the user can then search for the band or one from a similar era. The website will also provide the user with related artists that they may be interested in listening to. Once a user has found artists that they would like to see they can use that information to find out if they will be playing near them.

The tools used on the project are GitLab, Google Cloud Platform, Bootstrap, Javascript, Python, Flask, SQLAlchemy and PostgreSQL.

The website is hosted on Google Cloud Platform (GCP). To set up the GCP:

1. Create a GCP project,
2. Create an app.yaml file,
3. Install the gcloud sdk
4. Push the app to the app engine.

The project will ultimately be found on a url from NameCheap. The GUI is implemented using Bootstrap, and the frontend is implemented using JavaScript. The backend is implemented in Python and Flask. The database uses SQLAlchemy and PostgreSQL.

The APIs implemented are:

- https://app.swaggerhub.com/apis/Bandsintown/PublicAPI/3.0.0
- https://developer.spotify.com/documentation/web-api/
- https://www.songkick.com/developer/
- https://developer.ticketmaster.com/products-and-docs/apis/getting-started/

The website will include RESTful API, designed using Postman. The group collaborates using a shared GitLab repository.

When a user first enters the site, they will be greeted by the homepage- the splash page. At the top of the display there is a Navbar that presents the user with the option to either go to an about page where they can learn about the project or they can go to any of the model pages. In the middle of the splash page is a carousel that contains pictures of various musical artists. Once the user scrolls down they are presented with tabs implemented using Bootstrap that

contain the varying ways to search for music. These pages are linked using Flask so that they can be dynamic. The Tabs available are Artists, Venues, and Songs.

- “All” displays all the artists available and let the users freely browse for their artists.
- “Venues” displays the location that the artist will be performing at next.
- “Songs” displays the top songs of Artists.

The homepage uses Flask to connect to other pages such as songs, artists, etc. It uses render_template to connect to the HTML of the other pages. When building the website, it is already taking in consideration that the navigation bar will be updated as new music is added.

To browse by artist, click on the Artists tab. On the web page- artistPage.html, there would be a search by artist name, venue, top songs, origin and released date. For example, Queen is with the top song being Bohemian Rhapsody, released in 1970, and could play in London. There would also be similar artists to Queen listed below like AC/DC. There will be a location track for users to see if there are rock venues nearby with similar artists.

The artist page has a search bar for users to search for the artists. The page is divided into two parts: the navigation bar and main body. The navigation bar consists of links that consist of the about page, artist, songs, and venues, along with a link to the homepage and a search bar. The second part is the main information box. In this, it displays all information about the searched artist. The artist page displays the discography of the artist. It also has the picture and description of the artist. The page contains a table that contains information of the artist. The website also shows related music and artists of the searched artist. It also shows related music of the artists or artists of similar genres. The information box contains a table. The table is used to display the information in a correct alignment. The file artistsTable.html contains the information about the table. In artistTable.html, for example, “artist name” is a set of entities, where each entity is a name an entry. We have 3 entries right now, so the “artist model” consists of just 3 artists and all of their properties. You can see on the artistsTable.html what the artist's name model looks like. The page is also clickable, if clicking on AD/DC, the webpage will lead to a page containing the information of the artist.

To browse songs, just enter the desired search into the search bar. Similar to the artist page, the song page consists of two parts, the navigation bar and the main body. The navigation bar is used for searching different songs and displaying them. The search bar will show the result of the search. The second part is the main information box. It would consist of a table. For example, “songs” is a set of entities, where each entity is a song. We have 3 songs right now, so the “songs model” consists of just 3 songs and all of their properties. You can see on the songsTable.html what the song model looks like. It would include artist name, genre, top songs related to the artists, origin, and also released dates. Along with the searched songs, it would also show similar songs to the searched artist, and with relating information. While browsing songs, it will also include song names, albums, with similar songs and genres. There would be an option to see if there is a venue of similar music nearby.

The location page displaces the location of the artists from the users. The page is used to show the location of the user compared to the locations of nearby venues.

There is also a page called “All.” This page consists of all songs and artists that would allow flexibility for users. The set up is similar to other pages, with a search part and the main information box. It contains song name, album, artist and genre and released date. All the tables from the web page are sortable. The last page of the website is an about site, where information of all members who are working on the project and their basic information (such as majors, interests) is displayed. The page linked to the main page and displayed on the navigation bar.