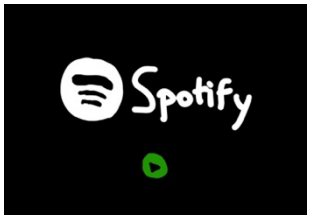
MILESTONE 2

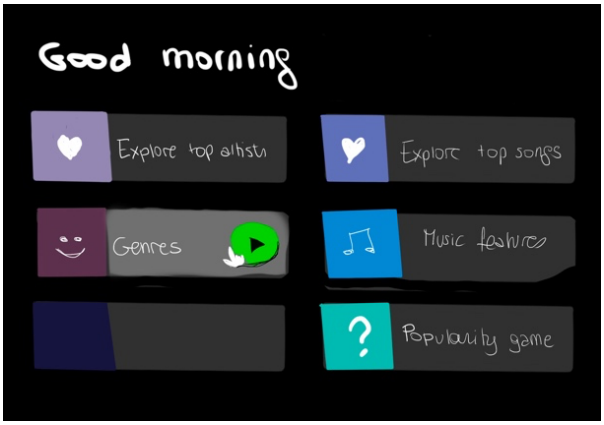
The goal of this project will be to visualise what makes a song or an artist popular on Spotify to then test our understanding in a small guessing game.



General view of website:

The website will consist of 5 parts, 4 with specific visualisations and 1 small game, each followed by some explanations on the different elements shown. It will follow a guiding thread to allow the reader to understand what are the common factors that make a song or an artist popular on Spotify.

1. A catalogue of the top artists chosen regarding their ranking.
2. A playlist presenting the top songs.
3. A graph connecting the genres present among the artists/songs.
4. A set of graphs showing the music features of the songs.
5. A game to guess the popularity of an artist.

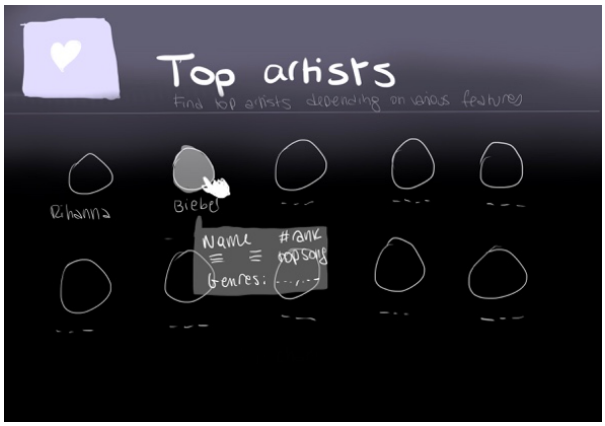


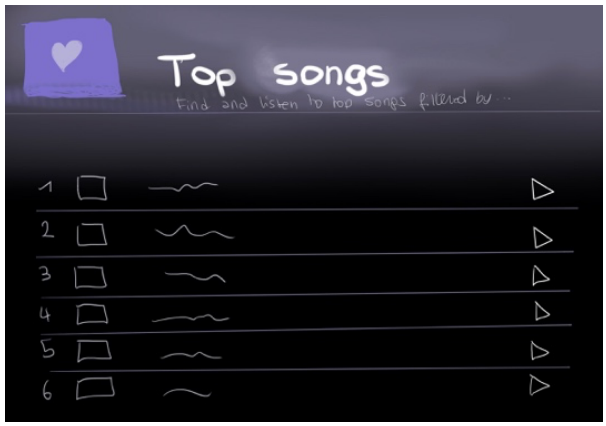
The top artists' catalogue:

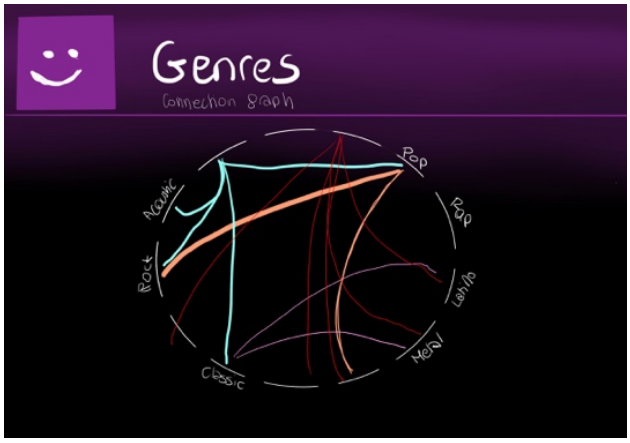
First, we will do a presentation of the top artists to get a better idea of the popularity trend. We will pick the 10 artists with the best ranking. Each of them will be represented by their picture that we will be able to select to show some more information like their rank, their top songs, and the genre of music. We took inspiration from the display that we can find on the Spotify profiles.

The top songs playlist:

To represent the top songs independently of the top artists we will simply display a playlist as it can be found on Spotify with the possibility to listen to each song. We want to keep the similarity with Spotify throughout the whole website to keep the reader in his usual experience of the application.





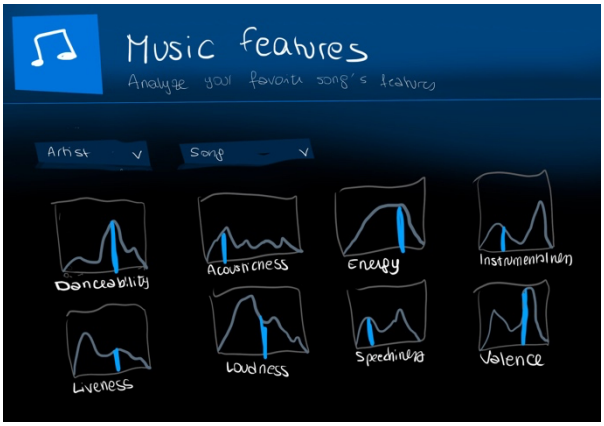


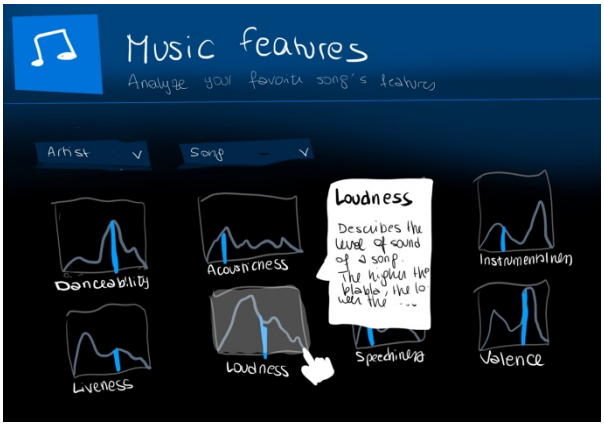
The visualization of the genres:

We have seen which artists and songs compose the top chart on Spotify. It is now interesting to understand a bit more the reason behind this ranking. To do so, we will first have a look at the genres and how they connect between them as they appear together in songs. We will use a circle graph with the possibility to click on each genre to have further details on their definition. The more two genres appear together in the ranking, the wider the link between them will be.

The visualization of the music features:

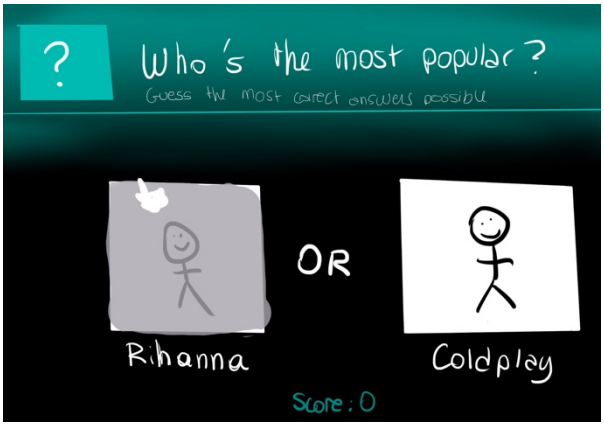
Now for the more detailed part, we will have a look through the features given for each song: danceability, acousticness, energy, instrumentalness, liveness, loudness, speechiness, valence. This will give more depth to the understanding of what makes a song so popular. For each feature, we will display a histogram. For a more challenging idea, we would like to add the possibility to select a certain song to and make it stand out in the histogram. This is represented in the pictures below by the blue lines. This would allow the reader to investigate on the artists and song that he likes.





The guessing game:

Finally, to finish on a fun note and to test the understanding of the reader, we will create a game. The idea will be to simply guess between two artists, which one is more popular i.e., which one has the best rank in the Spotify chart.



The tools:

We will use *Bootstrap* as our main CSS framework. We will use *fullpage.js* to get the vertical scrolling effect, and eventually we will use *Babel* to compile our code to be able to run it in any browser.
For the plots, we will mainly use *D3* and the Interaction lecture of week 5. For the circle graph on the link between genres, we will use the lecture of week 10 on Graphs and the *Cytoscape Javascript* library. Finally, for the embedded Spotify playlist of the top songs, we'll use the week 11 lecture on Sound visualization and the *Spotify API*.
We will obviously use the first lectures as well on Javascript and web development for the overall information needed.