VanHackaton 4.0

Frontend Code Challenge

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The Challenge

Create a single-page web application that takes an artist from the user and returns details about the artist and their events. The aim of the code challenge is to be able to understand the decisions made in building a web application. Focus on the requirements first and if you have extra time feel free to add bonus features. In the end we will review your submission in terms of its readability, architecture and creativity.

Good Luck!

Requirements

Create a web application using HTML, CSS and JS along with any framework/libraries of your choice. The web application being created will be used to take an artist and show details about the artist and their events.

The application should contain at least the following UI:

- A way to input the artist’s name.
- Show results based on the input of the artist’s name:
  - Artist Name
  - Artist Picture
  - Artist Facebook URL
  - Artist Events
    - Event Venue
    - Event City
    - Event Country
    - Event Date

Provide any necessary instructions we will need to be able to run and test your project.

API

Bands in Town has a an API available with documentation at:
https://app.swaggerhub.com/apis/Bandsintown/PublicAPI/3.0.0

Note:

- Providing the app_id is required by the api on every request, it can be any string.
- Base URL for the end points can be found at the top of the documentation page.

Submission

One of the easiest ways to track your changes and work is through development with git on github. Create a git repo on github and share the link upon completion.

Bonus Features

Here are some suggestions to make the app even better.

- Tests - Add test coverage to your code
- Cache - Persist the last entered artist and events across browser reloads/refreshes
- Styles - Make it look nicer.
- Creative? - Think of a cool feature? Add it!
- Deploy - Include a deploy strategy for your app.

General Tips

- Use any familiar frameworks or libraries to speed up development, don’t worry about implementing everything from scratch.
- Feel free to use a cli generator tool to get started quickly, something like create-react-app, ember-cli, angular-cli or vue-cli for example.

The Project

Technologies used

The project was developed using a HTML/CSS template implementing Bootstrap 4 and jQuery 3.2.1._PHP 7 was used for the backend code and communication with the APIs.

The decision not to use any PHP framework was based on the simplicity of the one page site. Using a framework like Laravel would generate unnecessary extra code and resources consumption.

APIs

The Bands in Town API was used to get the band's information and their upcoming events, as required by the client.

Also Google Maps API was used to display the venues location in a map, according to the latitude and longitude provided by Bands in Town API, and YouTube's API to show the artist's videos.

Site description

The one page site displays a search box in the header and next to it some space for previous searches. At first the previous searches will be empty, but it can show up to 6 previous results that will be populated as the user does successful searches. The number of previous results is less in smaller screens for responsiveness.

In the main body it shows a welcome message when no search was done. If there's at least one artist in the search history, the last successful search result will be shown instead of the welcome message.

The last searched user's information along with an error message will be displayed after an unsuccessful search.

After a successful search the artist's information and upcoming events will be shown.

The footer of the page only contains a copyright text.

Search box

The search box is in the top bar, that remains visible at that position while scrolling. In the search box the user con type the name of the band and press Enter, or click the button with the magnifying glass to run the search.

Previous searches

The previous searches section can have up to 6 previous searches. It displays the band image and has a tooltip box with the band's name that is shown when the mouse pointer is placed over the image.

Clicking on one of the previous searches will load the artist's information from the cache and redo the searches for videos and events.

On this point there are 2 possible approaches. Redoing the search, or storing the result in a cache and load it from there when the previous search is clicked.

For this project we choose to store the artist's information in the cache and redo the search for events and videos as the used APIs provide a fast response. For processes that take long time to finish (like complex database queries) it's better to use cache instead of re doing the process.

The artists cache used for the search history is stored in PHP's $_SESSION variable, so it'll be lost when the session is closed or expired. If the cache is to be preserved across sessions a database can be used to save the history in the server and cookies can store some information on the client side.

Band's information

The informations displayed for the band are:

★ Image
★ Name
★ Facebook page (if any)
★ YouTube videos (if any)
★ Upcoming event (if any)

Facebook page

Clicking on the Facebook icon, when present, will open the band's Facebook page in a new window.

YouTube videos

The name of the user is used to search videos using YouTube API. The *videoCategoryId* parameter is set to 10 in order to retrieve only music videos and limited to 20 results using the *maxResults* parameter.

If any video is retrieved by the API a YouTube icon will be displayed below the artist's name. When this icon is clicked a modal window opens with an embedded video player and the available videos. The first video in the results is loaded in the player by default, clicking on another video will load it in the player.

Upcoming events

If the band has upcoming events, those will be shown below the band's information in the same order they were retrieved by the API.

Each event shows the date and time of the show, the venue and location (city, state, country). If tickets are available a red ticket icon is shown next to the date and time.

Clicking on an event opens a modal window with the event's information:

- ★ Date
- ★ Venue
- ★ Location (city, state, city)
- ★ Line up
- ★ Map showing the location
- ★ Buy tickets button (if tickets are available at Bands in Town)

Clicking the buy tickets button will take the user to the tickets URL provided by the API.

Deployment

To deploy the code simply upload the files to a server that can run PHP 7 and change the configuration in the config.php file found in the includes folder to your preferences.

Enter the folder where the files were uploaded using a web browser and the page with the welcome message will appear.

Configuration

In the config.php file the following settings can be changed:

- **APP_ID**: APP ID used when calling Bands in Town API
- **TIME_FORMAT**: the date/time format used for the upcoming events
- **YOUTUBE_API_KEY**: API Key used to call YouTube API