Phase II Report

Team Information

Github Link: https://github.com/Mattgallant/AustinConcerts

Canvas Group: afternoon-2

Project Name: Austin Data Bass

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Motivation

Our site serves as a database for all of Austin's upcoming Concerts. We aim to make finding upcoming Concerts a seamless experience by providing all of the Venue, Artist and Concert details in one easy-to-use website. We know how hard it can be to find all the information about one Concert in one place. Our users are anyone from an avid Concert-goer, an Artist looking to find a Venue or someone looking for their first Concert to attend.

Requirements: Users

Our User Stories

Phase I

1. As a person who has bought tickets, I want to see information of the event, including the artist, venue, and details, so that I can be prepared for the event on the set date.
    - 2 hr estimated, 4 hr actual
    - We are assuming the user would find all of the information they need across the three models we have chosen. The primary model they would visit would be the concert model, and then relevant links to the other models would be listed.

2. As an owner/manager of the venue, I want to see and manage the information about my venue so that it accurately reflects my location and business, and can improve the management as needed.
    - 1.5 hr estimated, not yet implemented fully
    - We are assuming this would be a pretty difficult feature to add and we have not yet added. This would require a lot of additional features to be added…. At the very least, an owner/manager can see their information, just not manage it.

3. As a manager of the artist, I want to see and manage the information about the artist I am affiliated with so that the information accurately reflects my client and presents positive PR.
    - 2 hr estimated, not yet implemented fully
    - We are assuming this would be a pretty difficult feature to add and we have not yet added. This would require a lot of additional features to be added…. At the very least, a manager can see their information, just not manage it.

4. As a fan of the artist, I want to see where my favorite artists have performed and are going to perform next so that I can obtain tickets and see them live, as well as find more information about them.
    - 1.5 hr estimated, 1 hr actual
    - We are assuming this requirement would be fulfilled by the artist model instances. Each artist model will link to upcoming concerts to the concert model where they can see all the information they need. Since our site is currently focused on upcoming concerts, we have not yet implemented seeing past concerts.

5. As a fan of the venue, I want to know what interesting performances are coming to that venue so that I can obtain tickets and see how the venue adapts to different types of performances and artists.
    - 2 hr estimated, 2 hr actual

- This requirement will be fulfilled via the venue model. The venue model will display all relevant shows

Phase II

1. As a concert goer, I want to see data about concerts, venues, and artists in a well-organized grid format.
    - 2 hr estimate, 2 hr actual
    - For this we decided to make a 3x3 grid of 9 instances per page. This was also an official assignment requirement.
2. As a music enthusiast, I want to see a wide variety and many instances of concert, venue, and artist data.
    - 50 hr estimate, 70 hr actual
    - This involves getting all of our API data and getting into the database. We also made scripts to get all of the upcoming concerts and the corresponding venue and artist data. After this, we need to display all of our database data onto the frontend in a clean and organized fashion
3. As a concert browser, I want to see data broken up into individual pages for easier browsing.
    - 1 hr estimate, 1 hr actual
    - We are assuming that this means breaking up the Model index pages into a grid, and also have each concert, artist and venue have a unique page for each instance.
4. As a detail-oriented person, I want to see 3 attributes per instance of each Concert, Venue, and Artist on the respective grid pages.
    - 30 hr estimate, 50 hours actual
    - This story requires pulling all the data from APIs and storing it in the database. We then will create a grid page using HTML, CSS, Bootstrap and Django's template language to display the information and the 3 attributes per instance.
5. As a visually oriented person, I want to see a picture for each instance.
    - 1 hr estimate, 2.5 hr actual
    - This involved getting pictures from both the spotify API and yelp API. We simply passed image links into the database and then into the frontend in order to display the images.

Customer user stories

Phase I

1. As someone who wants to go to a concert, I want to see upcoming concerts.
    - 1 hr estimated, 30 min actual
    - We display this information in multiple different places. We assumed that the user would want to see upcoming concerts for each artist and for each venue, which

we have included. The user can also see all upcoming concerts through the Concert model itself.

2. As someone on a budget, I want to see the price of concert tickets.
    - 1 hr estimated, 1 hr actual
    - We have had trouble getting the exact ticket price of a concert via an API. For now, we are simply including a price range of the venue on the venue instance. We are assuming that this will suffice as a ticket price.

3. As a concert goer, I want to see where the concert venue is located.
    - 1 hr estimated, 20 min actual
    - We will complete this requirement both by displaying the address of the venue and also by including an interactive map that displays the surrounding area.

4. As someone concerned about the weather, I want to know if the venue is indoors or outdoors.
    - 1 hr estimated, 30 min actual
    - This information is hard or impossible to find from an API. We assumed that a simple picture of the venue would be enough to determine this information.

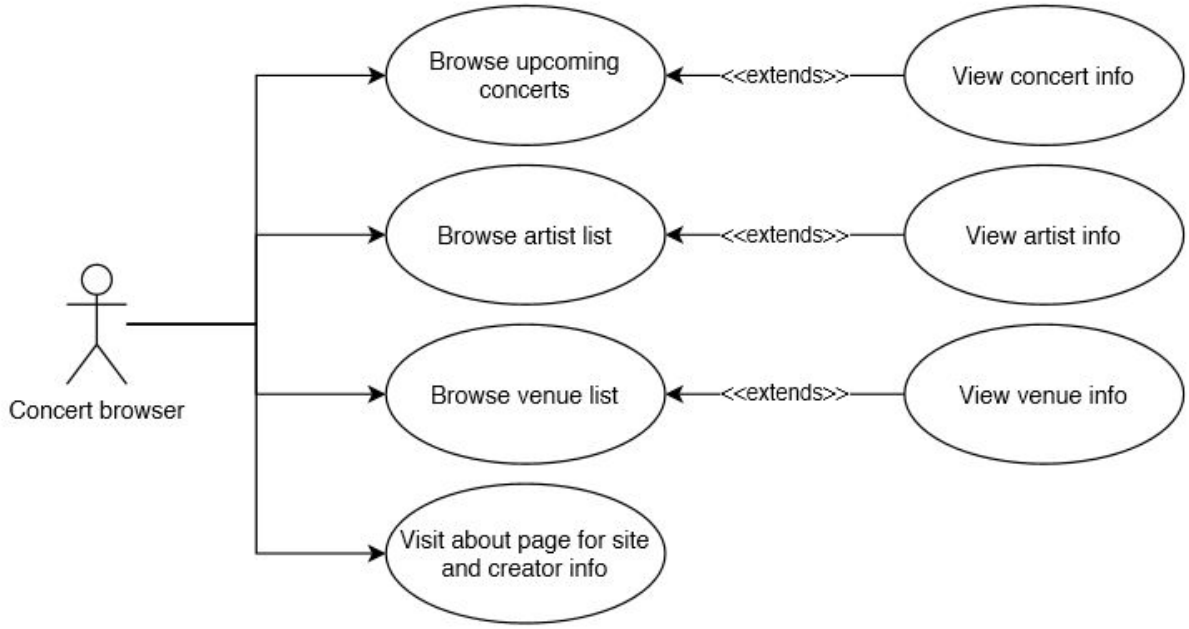
5. As a fan of specific genres, I want to know the genre of the concert and artist.
    - 1 hr estimated, 1.5 hr actual
    - This user story is fairly straight forward. We will simply include the genre(s) of each artist on their individual instance. The concert instances will link to the artist instance and will therefore be able to see genre for the concert.

Phase II

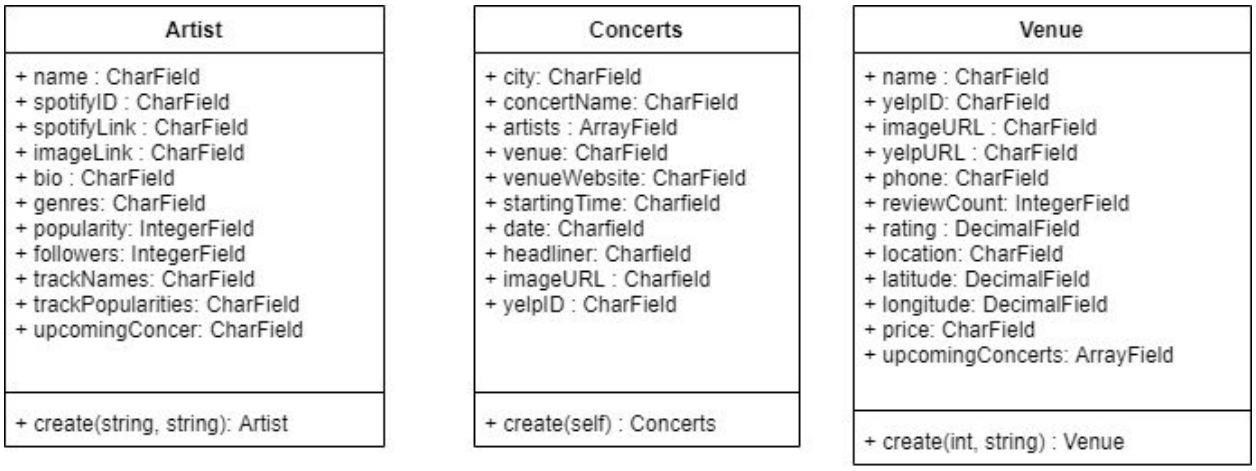
- Not required for this phase

Design

UML Use Case Diagram:



UML Class Diagram:



The application uses data from instances of three different models, Artist, Concert, and Venue, to generate a dynamic website that allows for users to learn more about upcoming Concerts in Austin. We pulled our information from three different APIs: Spotify, Songkick, and Yelp. The information for each instance was stored in a PostgreSQL database. By storing the data in this database, we are able to dynamically populate the pages to display all instances of each Model in a paginated fashion, as well as create the individual instance pages based on a universal

template specified for each Model. We paginated the instances into pages of 9 instances each via a python library. We hosted our website on Google Cloud which allows us to access all necessary servers and functionality. We also pulled from the GitHub API to get our repository stats, but this information was directly fed to the frontend rather than stored in our database.

USER EXPERIENCE:

To access the Austin Data Bass, a user first lands on the splash page, which includes a carousel of relevant images and a navigation bar to access the three pages of model instance lists, as well as the About Us page. Clicking on the About Us page provides the user with information about the creation of the website and the six developers of this project, complete with a picture, bio, and numbers of commits, issues, and unit tests.

Through the use of the nav bar, the user can click on the Artists tab to be directed to the list of all Artists in the database. This list includes the name of the Artist, hyperlinked to their instance webpage, their genre, and their relative popularity percentage. Clicking on a specific Artist takes you to the instance page of that Artist, which includes an image of the artist, a short bio, and a collection of stats from the Spotify API. Lastly, the Artist instance includes the Upcoming Concerts in Austin, with a link to the Concert instance page and the Venue instance page for the Concert on that specific date.

A user can either click on links to one of the specific instances of the models, or use the nav bar to access the list of model instances for the other two models. By clicking on the Venue tab in the nav bar, the user is taken to the list of Venues in our database, with a preview of the Venue on the right hand side of the web page. Clicking “See Venue Page” takes you to the specific Venue instance that you have selected. On this page is an image of the venue, with the Location and Contact information below, alongside a map of the location in Austin. There is also a rating of the Venue from the Yelp API with a link to the Yelp page for that Venue.

In the section below, we have a list of upcoming Concerts for that Venue, where a user can click on the hyperlinked date to be directed to the Concert instance on that date, or the user can click on the hyperlinked Artist name to be directed to that Artist’s instance page. Finally, we have compiled other relevant information at the bottom of the page, including the Venue Capacity, Food & Drink available, restrictions on allowed items, and the year the Venue opened.

The user can click on a specific instance of a Concert or an Artist from the Venue instance page, or they can click on the Concert tab in the nav bar to be directed to the list of Concerts in the Austin area. From the lists of concerts, you can click on an upcoming concert to be directed to the Event instance page. On each Concert instance page there is an image of the Artist performing at the Concert, a hyperlink to the Artist’s instance page, and the Event date and time. The Venue is listed below and is linked to the webpage of the Venue instance. Lastly, the Ticket Price Range and Opening Performances are included as well.

Testing

We utilized Selenium to test the navigation of the website. By traversing through the website and acquiring adequate node coverage, we can ensure that the website would remain functional through most if not all regular utilization of the website.

We also used Django Unit Tests to cover our Python code that handles the backend. This involves requesting data from APIs, creating instances for each model, and formatting and preparing the data to store in our remote database. By testing our backend Python code and the data process for each model, we can ensure that our data pipeline is working correctly.

Additionally, we set up the Mocha testing framework with Chai assertions to test our Javascript code. However, at this time we do not have any Javascript code to test. We will probably have more Javascript in the next phase in order to implement searching, sorting, and filtering of data. So at that time, our Mocha framework will be ready to test the Javascript code.

Models

Our three models are Artists, Venues and Concerts. These three models provide all of the information a user would need when looking for an Austin Concert. We used three main APIs that gave us the data for these models, Spotify, Yelp, and Songkick. The Artist model details information about the Artist including their bio, picture, Spotify stats and upcoming shows in Austin, with information pulled from Spotify. The Venues model provides our users with info about the Venue including the location, upcoming shows at that Venue, Yelp ratings and various information about the Venue, all of which is taken from the Yelp API. This model also includes coordinates that allow us to display a dynamic and interactive Google Map on each Venue page. The Concert model pulls together all the information about the show itself. It displays show time and date, city, concert name, artists performing, and venue. This information is pulled from the Songkick API. All of these models include pictures and links to the relevant instances of the other models.

Tools, Software, and Frameworks

In this phase we implemented the Django Framework to integrate Python alongside our already existing HTML, CSS, Bootstrap and JavaScript. We used Python to pull information from APIs and store them in a remote PostgreSQL Database hosted on Google App Engine. HTML then provided the basic template for each Instance as well as the navigation pages. Django allowed us to use Python inside of the HTML to access data from our database. We used Bootstrap for the design and overall appearance of our website, and CSS for more specific design aspects of our pages to increase consistency across the platform.

To test our project, we used Selenium to test our GUI, Django Unit Tests to test our Python code and API requests, and Mocha to test our future Javascript.

Reflection

Phase II

Our team worked incredibly well together for Phase II. We started the assignment a week before it was due and met daily for roughly hour-long Zoom meetings. We divided up the work for this section into frontend and backend, while also maintaining our same divisions based on model. This allowed us to work most effectively based on our understanding of the Model and the API. This also provided a well-rounded experience for each of us to understand the functionality of the Python Django server, PostgreSQL database, and using a Rest API.

Our team had consistent communication and responsibilities were successfully completed by each team member in a timely fashion. We used Slack to communicate, bounce ideas off of each other, as well as debug software issues. Our daily Zoom meetings were incredibly effective and kept us on track and focused on completing the tasks required for this phase. In addition, we set up additional Zoom meetings with each other as needed to resolve problems that came up. We also screen shared over Zoom to help debug each others' code using pair programming.

Though we worked as well as we could given the current circumstances, we must admit that it was quite difficult to navigate this group project. The requirements were steep and we felt that the timing of the due date for this phase was suboptimal at best. Because of our current situation, we were also very limited in our abilities to pair program, which likely caused an increase in time spent on this phase. Acclimating to conducting meetings online took a little bit. Everyone was also very thrown off by the new changes brought by the coronavirus situation and it made the Phase feel a lot more time crunched.

Phase I

Our team did a really great job working together for this phase. We started on the assignment early and immediately considered ways to divvy up the work-- we decided to divide the work based on model. We assigned two people to each of our three models. Starting early and dividing up the work allowed us to focus on our individual parts of the project and efficiently complete it. We had several meetings throughout the two week time period to update each other on progress (by way of Stand Ups) and any problems we were running into. We also stayed updated through regular use of GroupMe. With that being said, many of us are unfamiliar with the use of APIs and MongoDB to access and utilize database information about each model. This will be fundamental to our success in the future, and we will need to learn these tools on our own to be effective in phases 2, 3, and 4.

Our team learned a great deal during this phase. We all learned how to use Bootstrap as a CSS framework to stylize our website and make it reactive to window size. This really helped us make our webpage look professional and elegant. We also learned how to use JavaScript to import API data and for various other tasks like creating the Venues model search bar. The phase also gave us a chance to improve our understanding of HTML and CSS.