Individual Requirements Analysis for Semester Project

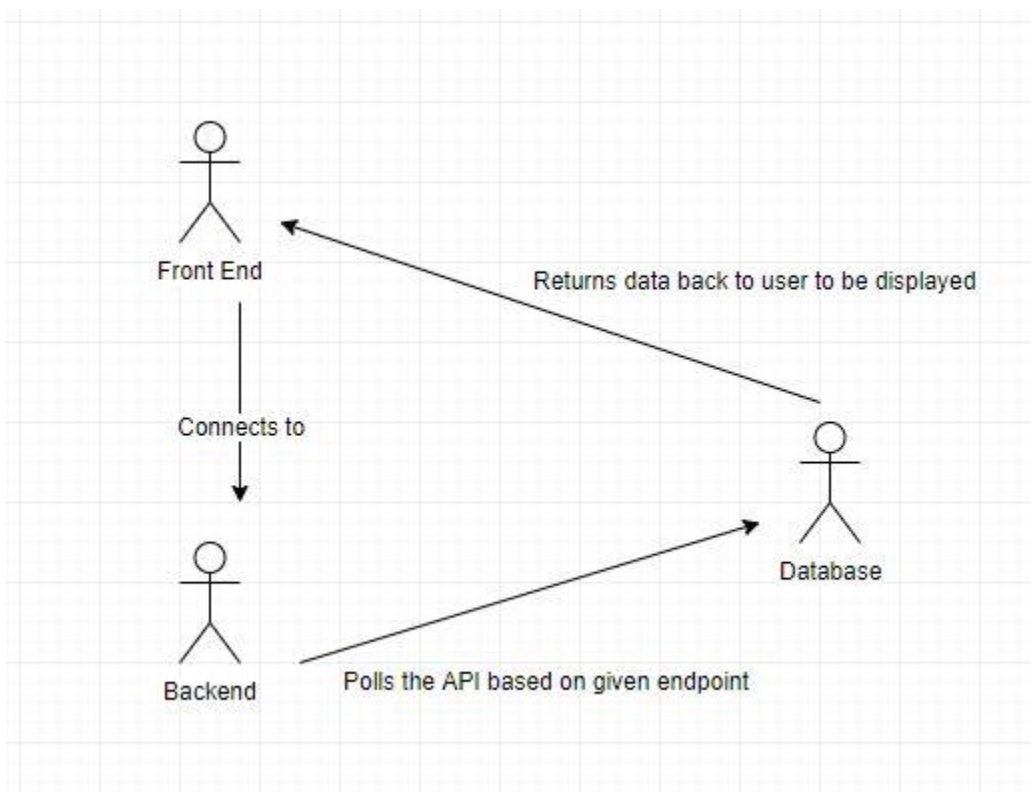**John Burkin**

Introduction

        I will be working on the front end of a team of mixed skills. My job will be to create a useful interface that is easy to navigate that provides meaningful information. I plan on using a new API endpoint that we create to populate a map of the United States with pins that shows the location of every contributor given the Augur API. You can click on a state and it will bring up the top 5 contributors from every state and some other information too.

Software Product Overview

        The product that I create will be a responsive map that is used to show locations of all the contributors that are in the Augur database. It will be able to place pins of them to allow the user to visualize where the contributors are. Once we have all that data, we can sort it out to show us areas with the top five contributors and once a state is clicked on it will show us the top five from that state and where they are located. We can also take this data and turn it into graphs that allow you to visualize other parts of the system. You should be able to search for contributors in this system whether it be by their email or their location.
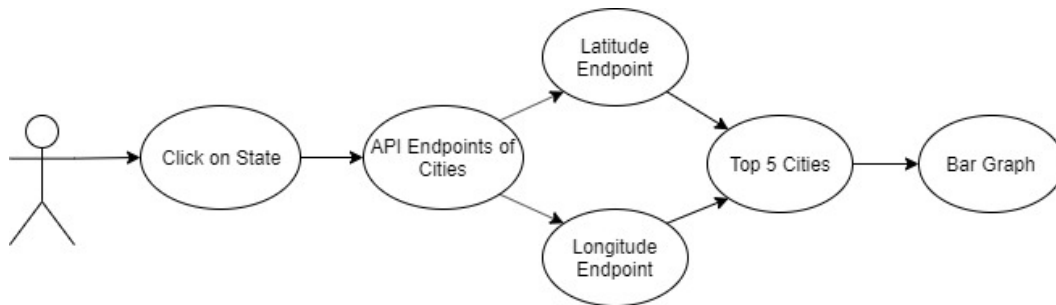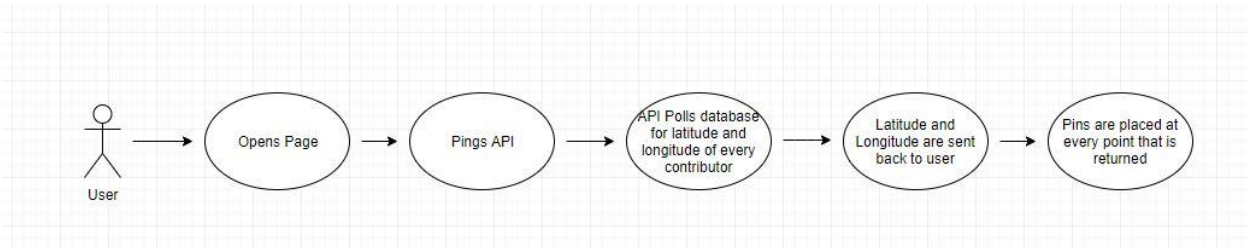
System Use

        Actor Survey

        The system will be used by others that need to visualize where the contributors are to a github repo. This may be companies that are looking to relocate or are looking for areas to hire people with similar skills to their top contributors.

System Requirements

Use Case Diagrams

Functional Specification

The page will have a login. Once passed the login it will have a map of the United States. It will use latitudes and longitudes provided by the API endpoint in order to place pins on the map. The pins will be grouped by state. The pins show us the locations of users and we can use that data to populate graphs that show different things about those users from the API. You must be able to search for a contributor. You must be able to click on a state.

Non Functional Requirements

Must be a responsive map

Must be able to scale to the whole world in the future

Must be able to handle a bunch of users on the site at once.

Must be able to update when a new user is added to the database.

Must be able to easily add more functionality to the front end of the site.

Design Constraints

Must only get latitudes and longitudes in the United States

Must place pins on map to represent a contributor

Must be able to click on states

Must be able to search contributors

Must be able to sort contributors by state

You can only click on one state at once.

Purchased Components

I plan on using a Google Maps API key, which I purchased in order to have access to their developer tools. This API is going to allow me to create a very interactive interface which will allow me to create the functionality that I want this application to have.

Interfaces

The interface that we will use is the Augur API endpoint that we create to get the latitude and longitude of every contributor. This will be an endpoint that is called in a fetch function and returns a JSON of all the latitudes and longitudes to be parsed. Once parsed this data can be used in the rest of the project environment.

I also, plan on using the Google Maps Javascript API to create a very interactive map of the United States that can place pins and zoom in and out easily.