



ADVANCED SOFTWARE ENGINEERING FINAL REPORT

HIDDENGEM

PREPARED BY:
KEVIN PARRA, BRIA WILLIAMS, NICHOLAS MOFFA, MICHAEL SANCHEZ

To:
DR. JEAN CHU
KEAN UNIVERSITY - DEPARTMENT OF COMPUTER SCIENCE

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Introduction

As New Jersey residents, we often live in New York City's shadow when it comes to events and entertainment. Travelers from north, central and south Jersey flood to the city or other neighboring states for things to do simply because there is a perception that New Jersey "doesn't have anything going on". To tackle this, HiddenGEM was created. HiddenGEM is a safe, community based, web application that seeks to showcase New Jersey's hidden gems on the world stage. Residents and visitors alike can visit the HiddenGEM website to view exciting events, read articles from other travelers, get directions and create an account to save preferences.

Purpose

The purpose of this document is to provide details of the HiddenGEM web application.

Intended Audience

Our intended audience would include:

- Anybody that is interested in visiting New Jersey and isn't sure what there is to do.
- Local NJ residents looking for something new or interesting to do in the week.
- Local NJ Businesses looking to promote and grow their businesses.
- Event Planners looking to spread awareness on events happening in New Jersey.

Scope

This scope of the HiddenGEM project was limited to:

- Implementing a full stack web application called HiddenGEM complete with a brand identity and imagery.
- Implementing the following functionality:
 - Search: Search events, articles, experiences in your area by location or keyword

- Map: Fully functioning Map to visualize the locations of different hidden gems across NJ
- User and Content Management: Create a profile to save preferences, get notifications and contribute articles about your travels.
- Admin and Moderator: Maintain the safety and security of the web application.
- Collaborating with customers and team members using agile methodologies including periodic meetings, sprint retrospectives and feedback sessions.

Background & Objective

Do you travel to places and wonder what is there to do? Or where are some good restaurants? Well the whole point of this project is to help customers with that and assist them on where the good restaurants are, where sporting events are happening or even where the closest amusement park is. When people travel to New Jersey from different states or countries they are not really sure on what to do. If there's one thing about New Jersey it's that it has pretty much everything. It has the beaches, the sports teams, the city feeling, the woods. You name it, New Jersey most likely has it.

Overall, the main objective for this project is to show visitors that there's plenty of things to do here in New Jersey and our website helps the people find things they want with only a quick search. A lot of times people go to visit another place they've never been to but never really know what to do or what's around the area. With this website we will be able to help people with what is happening around New Jersey. The best part is that it's not just a specific location, it's the whole state of New Jersey. So just because you live down in South Jersey doesn't mean you can't check

out what's happening in North Jersey and make a quick trip up north to go check something out that you think would be interesting or fun to attend.

Requirements, Personas and User Stories

Requirements of the HiddenGEM web application:

- User-friendly, responsive website design for optimal viewing on any device
- Intuitive navigation with categorized content for easy exploration
- Dynamic and engaging homepage featuring curated/ trending content
- Robust search functionality for users to find specific event, articles or recommendations
- User account system for personalized content recommendations and saved preferences
- Integration of multimedia elements (images, videos) to enhance content presentation
- Adaptable content management system for easy updates and additions

Personas and User Stories written for the HiddenGEM web application:

Persona 1: Traveler/User without account (Non Technical User)

- As a traveler I need to be able to search for different locations around New Jersey so that I can find Events/Entertainment/services near me.
- As a traveler I want the search function to be straightforward so that I can search for events easily.
- As a traveler I want the results to be displayed with pictures, bold fonts for titles, and easy to read fonts for the sake of not being confused while using.

Persona 2: Traveler with Account

- As a Traveler with an account I need to do everything a traveler can do.
- As a Traveler with an account I am able to create an account so that I can save/ favorite/ follow contributor content/ events/services.

- As a Traveler with an account I want to be notified of events in and around my area so that I can stay informed.
- As a Traveler with an account I want to be able to click links so that I can go directly to external restaurants/ event pages.
- As a Traveler with an account I am able to report community guideline violations to ensure that I am in a safe community.
- As a Traveler with an account I want to provide comments on Contributor posts and events for the site publicly for visitors of the site to see.
- As a Traveler with an account I want to provide feedback/ rating on Contributor services or events I have actually attended.

Persona 3: Contributor (Semi-tech savvy)

- As a contributor I need to do everything a traveler can do.
- As a contributor I want to select whether I am an individual contributor or a business account.
- As a contributor I want to post an Experience (events/articles) or services so that I may share my experience/ knowledge on local events, sights, services and restaurants.
- As a contributor I want to be able to rate my experiences from other events happening or that happened publicly on the website.

Persona 4: Administrator/ Power User (Tech savvy)

- As an admin, I want to customize permissions for different roles to ensure that users only have access to the features and data they need.
- As an admin, I want to create, edit, or delete content within the system to keep the information up to date.
- As an admin, I want to be able to review and approve user-generated content before it's published to maintain quality and consistency.
- As an admin, I want to collect user feedback and suggestions to continuously improve the system's usability and functionality.
- As an admin, I want to access detailed reports and analytics to monitor system performance, user activity, and data usage.
- As an administrator I need to be able to create notifications so that I can alert users of website maintenance and other website updates.

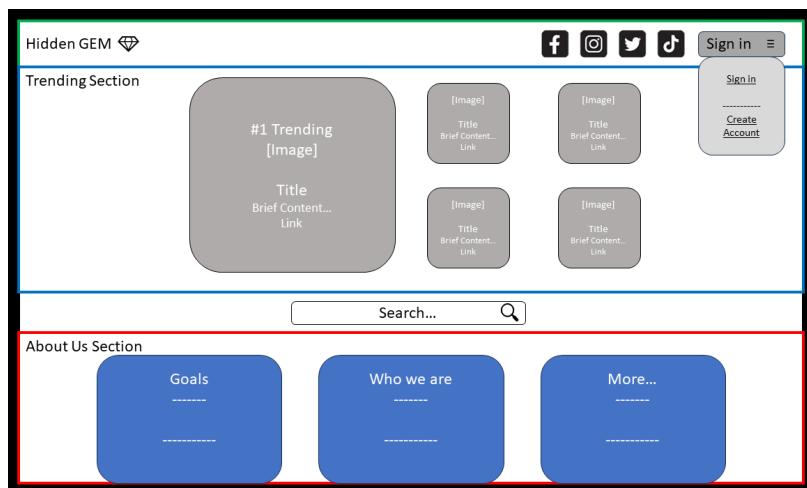
Persona 5: Moderator

- As a moderator I want to be able to review and approve user-generated content before it's published to maintain quality and consistency.

- As a moderator i need to review community guideline violations/ reports to ensure the safety of the community
- As a moderator, I want to create, edit, or delete non user-generated content within the system to keep the information up to date.
- As a moderator, I am rejecting/approving contributor accounts so that contributors can confirm NJ residency
- As a moderator I want to be able to login to my account securely and safely so that I can access the moderation tools and features.
- As a moderator I want a dashboard to display all useful moderation features.

LO-FI

The lo-fi sketches below served as our initial guide for the HiddenGEM web app design, outlining key pages like the homepage, login, register, and articles. Acting as visual blueprints, they provide a foundational view of our layout, structure, and organization. Each sketch captures essential design elements and user flow dynamics. While subject to change, these sketches were crucial for gathering feedback and initiating an iterative process. As we progressed through our development, they served well as a starting point, refining our designs and transitioning into more detailed front-end code.



[Back Button](#)

Hidden GEM 💎

Login

Username

Password

[Login](#)

Forgot Password? [Click here](#)
Don't have an account? [Register here](#)

[Back Button](#)

Hidden GEM 💎

Register

Username

Email

Password

Verify Password

Agree to [Terms of Service](#) and [Privacy Policy](#)

[Register](#)

Already have an account? [Sign in here](#)

Hidden GEM 💎

Search...

[f](#) [i](#) [t](#) [d](#) My Account

User info: Name Member since May 12 20xx My Posts (1)

Content Area

Title
Eaiffrreainvgaeinra eiamdeia leandiaend eain deiand
Elandaen d eaidneaid
Edaiedleandieleandienadienadienadie
leadniendiendieandienadineaidneaid
Eaidneiand

[Media]

Contributor

Rating
151 Reviewed

Comments Section

Commenter: Comment
 Reply: Comment
 Commenter: Comment

Functional Requirements

Requirement	Description
User/Staff should be able to login	If the user or staff is using the correct username and password it should allow them to login
Search for different things	Using the search bar on the home page should allow a person to search by zip code, city or keyword
View map should display the whole state of NJ	View map should display the whole state of NJ and on the map will show everything that is happening in the state. If click on it will give a brief description of what exactly you clicked on
Contact a developer by going to contact page	When a user goes to contact page then can type whatever they want if they have a complaint or question and it will get sent to parralk@kean.edu
Profile page for user	When signed into user there will be a profile page and it will show links related to what you put for your favorite food/hobbie
If logged in as Admin you should have different features	When you login as admin you have the option to add users, manage users, and add articles.
If logged in as Moderator you should have different features	When you login as moderator you have the option to moderate articles and to add articles if needed. You can also delete, flag or approve articles and update them.
Log out	Any user or staff should be able to log themselves out and the session will end

Non-Functional Requirements

A non functional requirement can be defined as criteria that specifies the quality attributes of a software system. Unlike functional requirements, a non functional requirement describes how a system should perform certain functions. They are crucial in ensuring the usability, reliability, and effectiveness of software. With this being said the Hidden Gem website also had its non-functional requirements that ensured an improved system reliable enough to be used by other users for real life situations.

Examples of Non Functional Requirements

- Performance: The website is currently being hosted on Kean University's "Obi" server that allows for the website itself to be available to any user that has the link to the website. The server allows for smooth processing of data and code allowing for both our back-end and front-end talk to each other with no disturbance caused by bad performance. The website contains more than 1400 results of "Events" happening all around New Jersey, with this being said the performance of the website has not seen a drop with all the information within.
- Security: the passwords pertaining to the users that create an account are all hashed for the purposes of maintaining the security of the valuable information of our users. The security is for the benefit of our users who choose to use the website. In a real world scenario the user expects their information to be secure when entering it to a website for credentials. Our site can provide that security

- Disaster Recovery and Backup: for the benefit of our users and our team we have multiple copies of the site on our local machines and we share a github where the code is also stored in. In the case of disaster there is a way to recover the website with little to no issues.

Tools and Technologies

Frontend: HTML, CSS, SCSS, JavaScript

Backend: mySQL and PHP

Web Server: Obi (Kean University's Server)

DBMS: IMC server (Kean University's DBMS server)

APIs:

- PredictHQ: This api was used to generate a dataset containing the events happening in the entire state of New Jersey. Having used this api the website is able to generate the results that are seen on the search function.
- MapBox: this api was used to implement the map function in the “View Map” tab of the website. This api allows for an integration of a dataset allowing for the map to create markers for each event around the state. The api also allows for user current location search, meaning the api can locate the user that is using the map if the user chooses to give the site the permission to do so. Lastly there is also a navigation function that allows the user to choose two points on a map and the api will generate directions from point A to point B.
- Google Neighborhood: This api allows users to view popular hotspots around the radius of a specific city, it implements its own search function that searches for actual places around the city. The search functions displays results followed by photos, a description, the location’s contact information and reviews left by real people

- Free Space: An api that allows the user to communicate with the developers, the api has the capabilities of making a contact form and adding an email address to receive the information from the form whenever filled out. These capabilities allow for a fully functioning contact form for the user to use and the developer to see.
- SummerNote: This api was used to generate a rich text editor function for the staff members to use. The editor itself is very simple but the api is capable of many tools within the text editor.

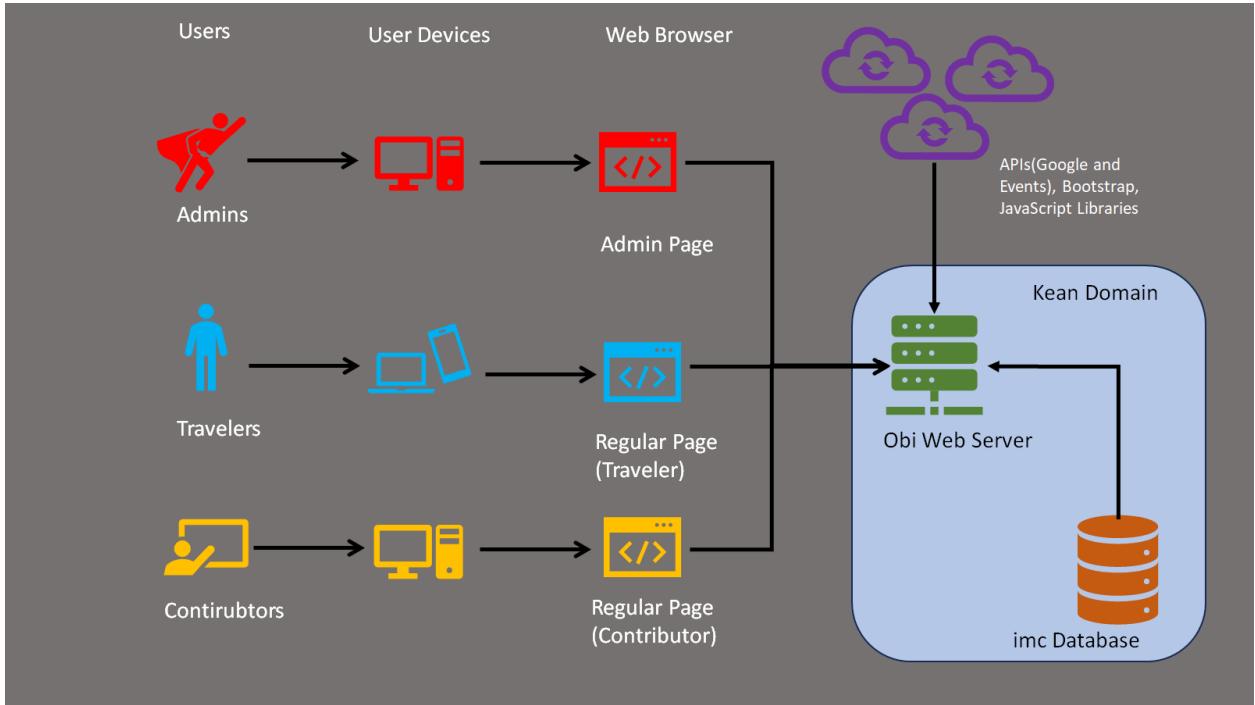
Tools:

- Github: used to Keep track of all our code in one place, here we can push our source code to a single repository allowing the team to view changes of the code and have a copy of the code for their use as well. Git hub allows the user to link the repository to Visual Studio code with the use of the Github computer application. Any changes done on visual studio can easily be committed onto the branches of the repository.
- Visual Studio: IDE used by the team to write, read, compile, and edit code. This is the workspace that the team chose to use due to the popularity and reliability of the software, allowing the team to write in many different languages without problems.
- Filezilla: This software allows for the user to access their computer files alongside the web application files that are stored on the server. The program allows for the team to transfer updated files into the server so the changes can be displayed on the live web application. The application has many functions, one of them having the ability to change the permissions of the files to make them visible or not.

- Google Meet: The team utilized this tool to have virtual meetings with each other on a week to week basis. Here we can verbally and visually share our progress with each other allowing for all of us to come together and discuss the progress, problems, and information about the project.
- Google Slides: This is how we would put together our presentations.
- Jira: Kept track of user stories and features for the project
- Azure: We started the project using Azure but eventually transferred everything away from it

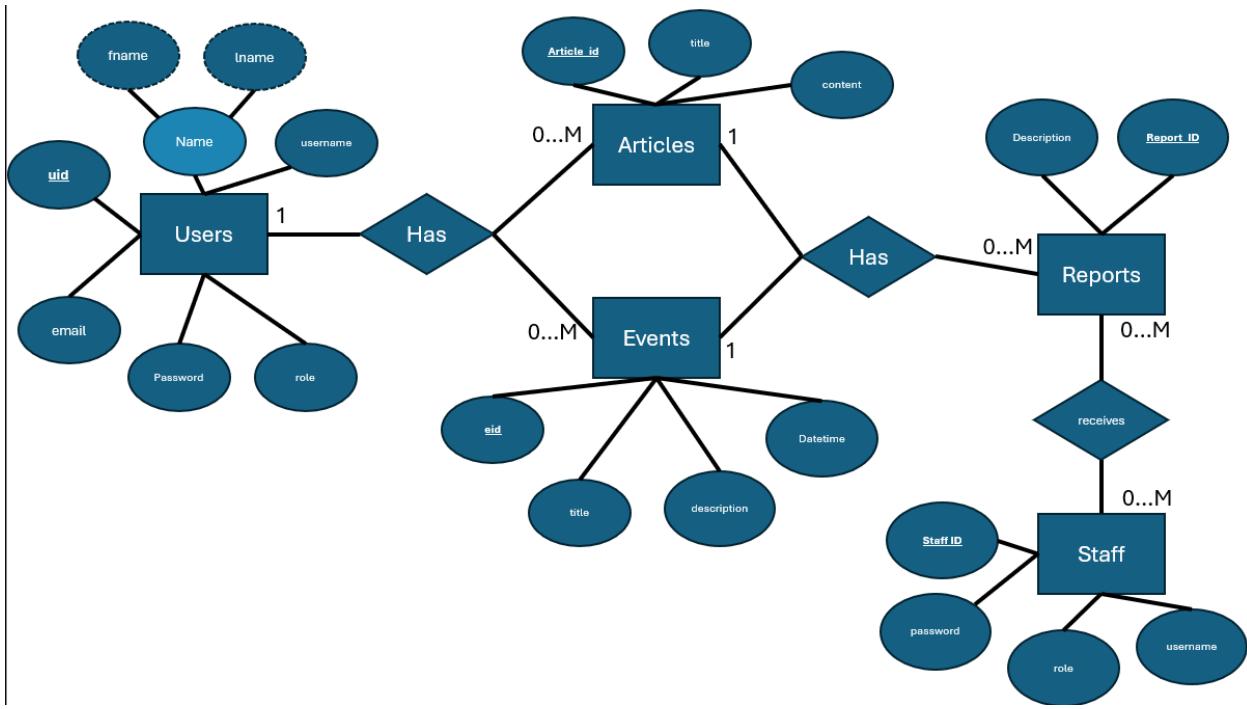
Architecture Diagram

The HiddenGEM System Architecture is designed to accommodate three distinct user roles: the admin, traveler, and contributor, each interacting with dedicated front-end pages tailored to their specific needs. Utilizing separate devices, these users access their respective pages, with administrators accessing admin-specific pages and regular users accessing traveler and contributor versions. All these front-end pages are interconnected with the Kean OBI web server, establishing a link to the Kean IMC database server, both residing within the Kean domain. This centralized structure ensures efficient data management and retrieval. Additionally, the OBI web server establishes connections to external APIs such as Google, Events, and Mapping, as well as integrates JavaScript libraries and Bootstrap, enhancing functionality and user experience by tapping into external resources and robust web development tools. This comprehensive architecture ensures seamless interactions and data flow within the HiddenGEM system.



System ERD

The HiddenGEM System ER Diagram visually illustrates the relationships among key entities in our system, including users, articles, events, reports, and staff. These connections define the intricacies of our data model, such as users having multiple or no articles/events, while each article/event is attached exclusively to one user. Articles/events may have zero or multiple reports associated with them, but each report is linked to only one article/event. Staff members can receive numerous reports, creating a reciprocal relationship where reports can be received by several staff members. Despite the initial clarity of our ERD, complications arose during the database transfer from Azure to OBI, resulting in some divergence between the final database design and the original ERD. But this adaptation highlights our adaptability and problem-solving skills, ensuring the ongoing coherence and functionality of HiddenGEM's database structure.



Database Design

The HiddenGEM database design was meticulously planned with an array of tables, including posts, events, articles, users, staff, and more, each interlinked with intricate and meaningful relationships to ensure a cohesive and organized structure. Initially, the database was set up on Microsoft Azure, reflecting our vision for efficient data management. However, unforeseen challenges arose when the free trial on Azure expired, compelling us to swiftly transition to Kean's OBI Database. This unexpected shift posed a significant hurdle, requiring us to expedite the process of rebuilding the database within the constraints of time. In our transition to the OBI Database, a priority was placed on recreating the most essential tables first, ensuring the continuity of Hidden GEM's functionality and paving the way for subsequent iterations and enhancements. This experience highlighted our adaptability and resilience in overcoming

unforeseen obstacles during the database design phase. The result of the experience was the following few tables below:

hg_users	Staff	Events
<ul style="list-style-type: none"> uid INT(11) fname VARCHAR(255) Iname VARCHAR(255) username VARCHAR(255) email VARCHAR(255) dob DATE pword VARCHAR(255) role VARCHAR(50) hobby VARCHAR(255) favorite_food VARCHAR(255) profile_picture BLOB verification_token VARCHAR(255) is_verified TINYINT(1) brandname VARCHAR(255) mailSub TINYINT(1) 	<ul style="list-style-type: none"> StaffID INT(11) fname VARCHAR(255) Iname VARCHAR(255) email VARCHAR(255) dob DATE Srole VARCHAR(2) pword VARCHAR(255) username VARCHAR(255) 	<ul style="list-style-type: none"> id VARCHAR(255) duplicate_of_id VARCHAR(255) parent_event_id VARCHAR(255) relevance VARCHAR(255) updated VARCHAR(255) title VARCHAR(255) labels VARCHAR(255) phq_labels VARCHAR(255) category VARCHAR(255) Description VARCHAR(10000) start VARCHAR(255) end VARCHAR(255) predicted_end VARCHAR(255) timezone VARCHAR(255) duration VARCHAR(255) country VARCHAR(2) lat VARCHAR(255) lon VARCHAR(255) geo VARCHAR(400) placekey VARCHAR(255) impact_patterns VARCHAR(255) predicted_event_spend_total INT(11) predicted_event_spend_accommodation INT(11) predicted_event_spend_hospitality INT(11) predicted_event_spend_transportation INT(11) venue_id VARCHAR(255) venue_name VARCHAR(255) venue_formatted_address VARCHAR(255) scope VARCHAR(255) rank INT(11)
Indexes	Indexes	11 more... Indexes

Scrum Board

For the purposes of this project we utilized JIRA software to keep track of the project's Scrum board. Below is a screenshot of the exported board. [see attached Jira_Issue_List.xls for detailed view]

Summary	Issue key	Issue id	Issue Type	Status	Project key	Project name	Project type	Project lead	Project lead id	Project descrip	Priority	Resolution
Figure out if we can get more resources from Azure web host.	HID-32	10095	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Profile: "hiddenGem of the week" Signup to get "trending" events and activities	HID-31	10094	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Admin Log in	HID-30	10093	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Database Design	HID-29	10092	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Research: Trending and popular content sections.	HID-28	10088	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Administrative dashboard for content management and user administration.	HID-26	10090	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
HiddenGEM is mobile friendly	HID-24	10085	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Research: Content moderation and reporting tools to review and manage user-generated content	HID-21	10084	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Google API for finding stuff near me	HID-20	10083	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Ability to create, edit, and publish articles, Events, business profile and reviews with ease	HID-17	10080	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Categorization of content by topics, locations, and types.	HID-16	10079	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
User has a profile feed	HID-13	10073	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Automated email notifications for new content.	HID-11	10068	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Login into website	HID-8	10065	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
User feedback reports	HID-7	10075	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Search functionality by location	HID-6	10078	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Profile: Create event button > create event page, Create article button > editor	HID-5	10072	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
User registration with valid email.	HID-4	10071	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Categorization of content by Experience and Eat + Drink	HID-3	10069	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Results: Support for multimedia content, such as images and videos.	HID-2	10066	Task	Done	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium	Done	
Profile: Like, comment, and share on social media functionality on articles and events	HID-25	10089	Task	In Progress	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium		
Reporting for content performance and user activity.	HID-23	10091	Task	To Do	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium		
Integration with analytics tools to track user behavior and engagement.	HID-22	10086	Task	To Do	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium		
User profile has a follow button	HID-18	10081	Task	To Do	HID	HiddenGEMS	software	Bria Williams	712020:9f3be9a-889a-41c4-afcd	Medium		

Source Code

The source code for this project was written in PHP, HTML, CSS, SCSS, JavaScript and MYSQL.

See below source code snapshots for key features. [see Github for Source code]

Profile:

```
<html>
<head>
    <link rel="stylesheet" type="text/css" href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css" re
    <link rel="stylesheet" href="profile.css">
</head>
<body>
<?php
    include "dbconfig.php";
    $con = mysqli_connect($host, $username, $password, $dbname);

    // get 'logged_in' cookie that was set in 'login.php'
    if(isset($_COOKIE["logged_in"])) {
        $token = $_COOKIE["logged_in"];

        // extract email from the cookie (formatted 'email|id|name')
        $email = explode('|', $token)[0];

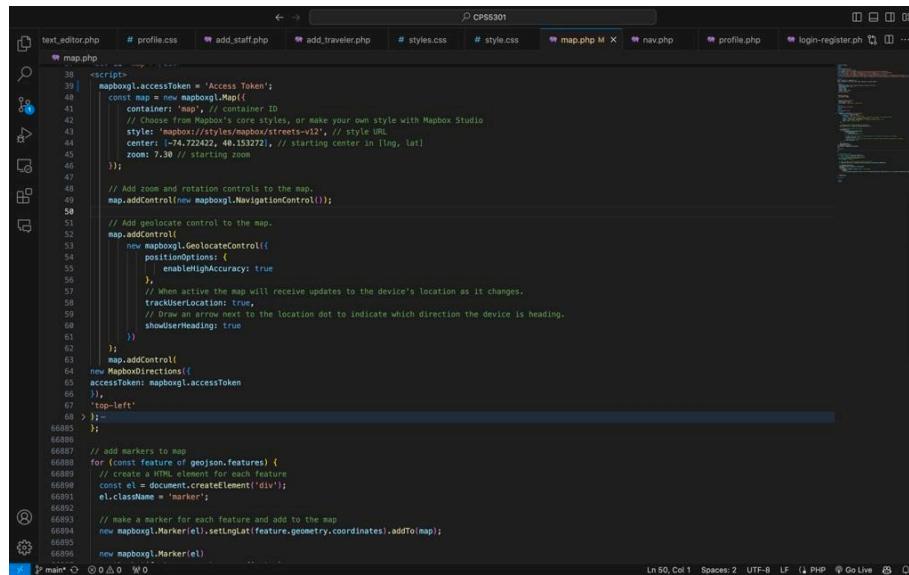
        // query Database for this user (from email) and get their name, email, favorite hobby and food
        $query = "SELECT * FROM hg_users where email = '$email'";
        $result = mysqli_query($con, $query);

        if ($result) {
            if (mysqli_num_rows($result) > 0) {
                $row = mysqli_fetch_array($result);
                $fname = $row['fname'];
                $lname = $row['lname'];
                $email = $row['email'];
                $hobby = $row['hobby'];
                $fav_food = $row['favorite_food'];

                // access map of hobby => articles and food => articles to show articles
                $hobby_to_article = [
                    'reading' => [
                        'https://www.mycentraljersey.com/story/things-to-do/2022/03/31/nj-library-week-2022-activities-historic-l
                        'https://bestthingsnj.com/bookstores/#gsc.tab=0',

```

Map:



```
38     <script>
39        .mapbox.accessToken = "Access Token";
40         const map = new mapboxgl.Map({
41             container: "#map", // container ID
42             // Mapbox Studio styles, or make your own style with Mapbox Studio
43             style: "mapbox://styles/mapbox/streets-v12", // style URL
44             center: [-74.722422, 40.155272], // starting center in [lng, lat]
45             zoom: 7.38 // starting zoom
46         });
47
48         // Add zoom and rotation controls to the map.
49         map.addControl(new mapboxgl.NavigationControl());
50
51         // Add geolocate control to the map.
52         map.addControl(
53             new mapboxgl.GeolocateControl({
54                 positionOptions: {
55                     enableHighAccuracy: true
56                 },
57                 // When active the map will receive updates to the device's location as it changes.
58                 updateLocationOnPageLoad: false,
59                 // Draw an arrow next to the location dot to indicate which direction the device is heading.
60                 showUserHeading: true
61             })
62         );
63         map.addControl(
64             new MapboxDirections({
65                 accessToken: mapboxgl.accessToken
66             })
67         );
68     </div>;
6885
6886     // add markers to map
6887     for (const feature of geojson.features) {
6888         // create a HTML element for each feature
6889         const el = document.createElement('div');
6890         el.className = "marker";
6891
6892         // make a marker for each feature and add to the map
6893         new mapboxgl.Marker(el).setLngLat(feature.geometry.coordinates).addTo(map);
6894
6895         new mapboxgl.Marker(el)

```

Login:

```
((-- Card start -->
<div class="card" style="background-color: #f2f2f2; border-radius: 10px; padding: 20px; margin-bottom: 10px; border: 1px solid #ccc; box-shadow: 0 0 10px 0 #ccc; position: relative; height: 300px; width: 100%;">
    <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background-size: cover; background-position: center; background-color: black; opacity: 0.5; z-index: -1; "></div>
    <div style="text-align: center; margin-top: 20px; z-index: 1; ">
        <h2>Register</h2>
        <form id="SignupForm" name="SignupForm" method="post" action = "register.php">
            <div class="form-outline mb-4">
                <input type="text" name="signupEmail" id="signupEmail" class="form-control form-control-lg" placeholder="example@email.com" minlength="5" maxlength="50" required>
                <label class="form-label" for="signupEmail">Enter a Valid Email Address</label>
            </div>
            <!-- Username input -->
            <div class="form-outline mb-4">
                <input type="text" name="signupUsername" id="signupUsername" class="form-control form-control-lg" placeholder="Username" minlength="5" maxlength="20" required>
                <label class="form-label" for="signupUsername">Enter a valid Username(Alphanumeric and at least 5 character long )</label>
            </div>
            <!-- Password input -->
            <div class="form-outline mb-4">
                <input type="password" name="signupPassword" id="signupPassword" class="form-control form-control-lg" placeholder="Retype password" minlength="8" maxlength="15" required>
                <label class="form-label" for="signupPassword">Enter a valid Password(8-15 characters, alphanumeric, Case Sensitive, Include atleast 1 number and 1 uppercase letter.)</label>
            </div>
            <div class="form-outline mb-4">
                <input type="password" name="signupPassword2" id="signupPassword2" class="form-control form-control-lg" placeholder="Retype password" minlength="8" maxlength="15" required>
                <label class="form-label" for="signupPassword2">Retype Password</label>
            </div>
            <div class="form-outline mb-3 row">
                <div class="col">
                    <input type="text" aria-label="first name" name="fname" id="fname" class="form-control" placeholder="First Name" maxlength="55" required>
                    <label class="form-label" for="fname">First Name</label>
                </div>
                <div class="col">
                    <input type="text" aria-label="last name" name="lname" id="lname" class="form-control" placeholder="Last Name" maxlength="55" required>
                    <label class="form-label" for="lname">Last Name</label>
                </div>
            </div>
        </form>
    </div>
</div>
```

Content Editor:

```
100 $sql = "SELECT * FROM Staff where StaffID=$login_id";
101
102 $result = mysqli_query($con,$sql);
103
104 if($result)
105 {
106     $row = mysqli_fetch_array($result);
107     // $role = $row['Role'];
108     echo "<br> Welcome $role: $name </b>";
109     echo "<br><a href='staff_logout.php'$role logout</a>";
110     echo "<a href='manage_users.php'>Manage Users</a>";
111     echo "<a href='staff_dashboard.php'>role Dashboard</a>";
112     echo "<br> ";
113
114     echo "    <form id='postForm' actions='save-content.php' method='POST' enctype='multipart/form-data' onsubmit='return postForm()'
115     >
116         <b>Title</b>
117         <input type='text' class='form-control' name='title'>
118         <br/>
119         <b>Keyword</b>
120         <input type='text' class='form-control' name='keyword'>
121         <br/>
122         <textarea id='summernote' name='content' rows='10'></textarea>
123
124         <br/>
125         <button type='submit' class='btn btn-primary'>Save</button>
126         <button type='button' id='cancel' class='btn'>Cancel</button>
127
128     </form>";
129
130 }
131
132 else{
133     echo "You must be logged in to add content. <br>";
134 }
135
136 die;
137
138 mysqli_close($con);
139
140 ?>
```

Unit Testing

Unit testing is a type of software testing where individual units or components of a software system are tested independently. The primary purpose of unit testing is to validate that each unit of the software performs as designed.

Benefits of unit testing include early bug detection, facilitates change, design feedback, and improvement of code quality. These are just a few examples of the many reasons why unit testing is beneficial.

Manual Unit Testing

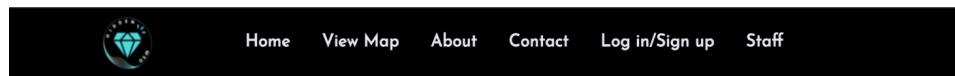
Manual testing is when the developers of the software project manually go into the project or pieces of the project and test them to see if they are functioning as intended. With this being said I can add that the Hidden Gems team did in fact perform multiple manual unit tests on our system and individual parts of our system to ensure that said system meets the requirements that was set for it.

This includes having multiple sessions of code review to read through our code and double check that bugs are not present and that each piece of code runs the way it is supposed to. We also set up many manually created test cases to test the system to complete various tasks. This includes the log in function, the search function, the map function etc. The manual testing in fact did help the team discover bugs, errors, and smelly code. Due to this we were able to make the necessary changes and modify the code so it can be easily read, replicated, and clear to understand.

Software Manual

Homepage

- NavBar: Allows for users to switch between pages of the website, the navbar is always at the top of the page for the convenience of the user. There is a function implemented as well where if the user is logged in the navbar switches providing options for the logged on user.



- Search function/search results: The search function allows the user to conduct a search for events happening around the state. The search can be conducted by using a zip code, city name, or keyword. Based on that the user will be redirected to the search results page where the results will be displayed based on what the user typed in.



Search Results:

[Big Holiday Shop](#)

Description:
This event, titled 'Big Holiday Shop', is a part of the expos category. More details about this event may be available closer to the event date.

Address:
Wyckoff YMCA, Greenwood Avenue, Wyckoff, Bergen County, New Jersey, 07481, United States

Category: expos

Start Date & Time: End Date & Time:
2023-12-02T05:00:00Z

[Somerville Holiday Jubilee](#)

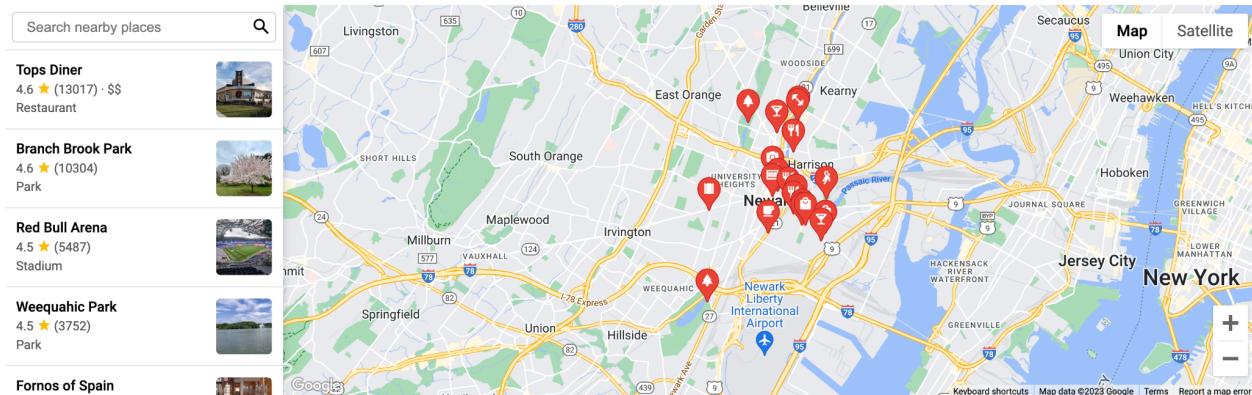
Description:
This event, titled 'Somerville Holiday Jubilee', is a part of the festivals category. More details about this event may be available closer to the event date.

Address:
Somerville Veterans Memorial, West End Avenue, Somerville, Somerset County, New Jersey, 08869, United States

Category: festivals

- Information cards: These are informative cards that are labeled as popular landmarks in the state due to their everlasting popularity.
- Gem of the Week: This is a google map api known as “Google Neighborhood” where the user will be able to view hotspots of specific cities, the google api also has a built in search function to search for places in that city.

Gem of the week:



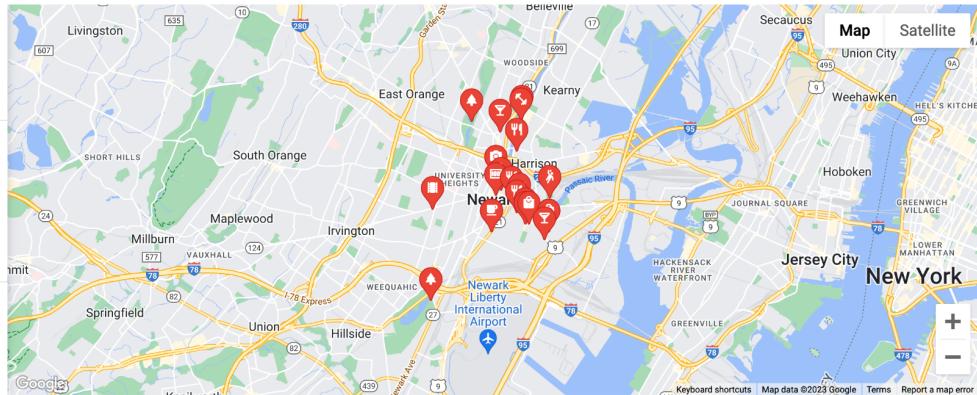
Gem of the week:

[← Back](#)

Tops Diner
4.6 ★★★★★ 13017 reviews · \$\$
Restaurant

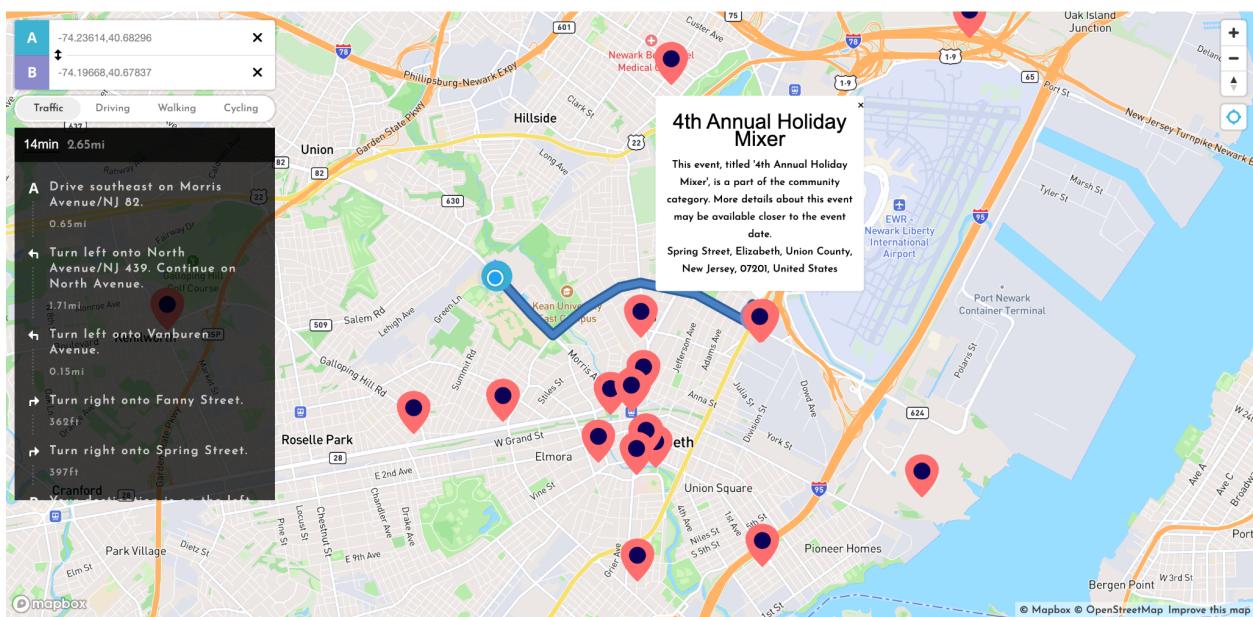
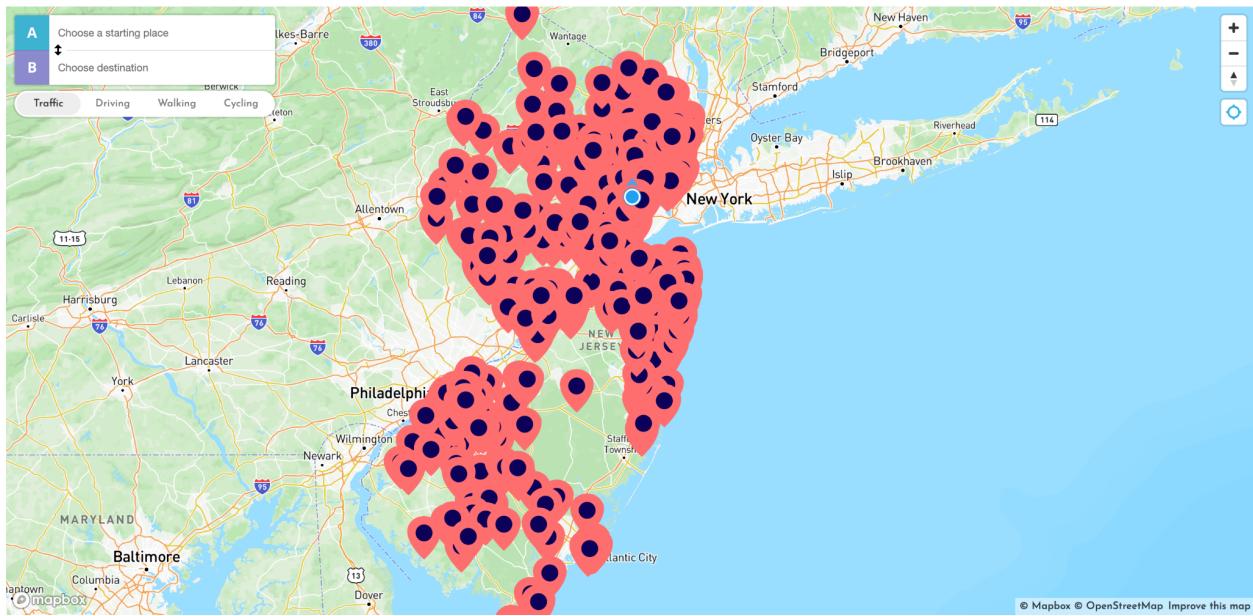
📍 500 Passaic Ave, East Newark, NJ 07029, USA
🌐 www.thetopsdiner.com
📞 (973) 481-0490
🕒 Mon - Sun 8:00 AM – 11:00 PM





[View Map Page](#)

- **Map Function:** This map utilizes the map box api which allows the website to generate a full map of New Jersey and add in the events by the use of markers. The map also comes equipped with a “Current Location” function which allows the website to locate the machine that user is using if the user decides to give the site the permission to do so. The map also has a navigation function that allows the user to select two points on the map including their own location and an event location for the map to generate directions on how to get from point A to point B.



Contact the team pages

- Contact methods: The About us page includes profile cards for each team member with a contact button so the user has the ability to contact each team member individually via email. Another form of contact is through the “Contact” page, this

page allows the user to fill out a form and send a message to the Hidden Gems team as a whole.

Bria Williams

Project Manager

responsible for planning, executing, and overseeing the successful completion of a project. This role involves coordinating team members, managing resources, mitigating risks, and ensuring that the project meets its objectives within the defined scope, timeline, and budget.

wilbria@kean.edu

Contact



[Home](#) [View Map](#) [About](#) [Contact](#) [Log in/Sign up](#) [Staff](#)

Q

Get In Touch

Please do not hesitate to get in touch with our team through our "Get in touch portal".
Here you have the liberty to share your feedback with the team as well as any concerns/problems that you as the user may have encountered.
Your feedback is very important to us as we take your feedback very seriously. we are always looking for ways to improve!

(908) 737-5326

parraolk@kean.edu

Kean University

Name	<input type="text"/>
Phone	<input type="text"/>
Email	<input type="text"/>
Message	<input type="text"/>

Submit

User Login/Register

- The hidden Gem website offers a portal for the users to be a part of by registering themselves and logging into the site. The user as stated before can create an account on the hidden gem website on the Login/Sign up page and they can also log into their personalized accounts. In the registration form the user can add some hobbies and food they like as well as an account type whether they want an individual account or a contributor account link to a business.

[Go Back to Homepage](#)

Register as Traveler

No file chosen

 Upload profile picture

example@email.com
Enter a Valid Email Address

Username
Enter a valid Username(Alphanumeric and at least 5 character long)

Enter password
Enter a valid Password(8-15 characters, alphanumeric, Case Sensitive, Include atleast 1 number and 1 uppercase letter.)

Retype password
Retype Password

[Go Back to Homepage](#)

Login

Email eg. example@email.com
Email Address

Password
Password

Remember me for 30 days [Forgot password?](#)

Don't have an account? [Register](#)

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The screenshot shows a user profile page for Kevin Parra. At the top, there's a navigation bar with links for Home, About, Contact, and Logout. A notification icon in the top right corner shows a red '4'. On the left, there's a sidebar with a circular profile picture of Kevin Parra, his name 'Kevin Parra', and links for Home, About, Contact, and Logout. The main content area has a section titled 'About' with fields for First Name (Kevin) and Last Name (Parra), and an Email field (parraolk@kean.edu). Below that is a section titled 'Favorite Things' with two tables: one for Food (Pasta) with links to Article 1 and Article 2, and one for Hobbies (Music) with links to Article 1 and Article 2.

Staff Login/Homepages

- The staff members of the Hidden Gems website also have their own portal that they can log onto whether they are an administrator or a moderator. The types of accounts although staff accounts have different abilities and functions that each can perform.
 - Moderator account: This account has the ability to Moderate content such as the articles from the contributor users. On the moderation page the user can moderate the articles that are in the database, this includes editing them, flagging them, approving them, or deleting them. A moderator also has the ability to add articles into the database.

Staff Dashboard

Welcome Moderator: super
[Moderator logout](#)

Content Management

[Moderate Articles](#)

[Add Article](#)

[Moderator Dashboard](#)

Article ID	Title	Content	Keywords	Author	Date Posted	Last update by	Status
2	My First Post and update	My First Post and update	new keyword		2023-12-12 13:32:55	super	✓ Flagged Delete Approved
4	test	this is for the demo	fyp	super	2023-12-12 19:37:43	super	
5	American Dream	My trip to the American Dream Mal	fyp	super	2023-12-12 13:32:55	super	Flagged ▾
6	test	this is a test.	fyp	Bria	2023-12-12 13:32:55	super	Flagged ▾

[Update Article](#)

Content Editor

Welcome Moderator: super
[Moderator logout](#)
[Manage Users](#)
[Moderator Dashboard](#)

Title

Keyword

[Save](#)

[Cancel](#)

- Administrative Account: The administrator on the other hand can log in and has the abilities to manually create accounts for both our users and staff. The administrator also has the ability to manage the user accounts and can delete a user if need be. Lastly, the administrator can also add an article if he/she so chooses to do so.

User Management

Welcome Admin : Bria

[Admin logout](#)

[Add Users](#)

[Admin Dashboard](#)

The following users are in the database:

UserID	FirstName	LastName	Email	Username	D.O.B	AccountType	Delete
1	John	Smith	MichaelDSanchezLopez@gmail.com	MikeySZ	1991-08-31	traveler	Delete user
2	Nick	Moffa	moffan@kean.edu	nickk	2000-12-06	traveler	Delete user
3	jo	smo	moffalax13@gmail.com	Test1	2000-12-07	traveler	Delete user
4	Mike	Anything	sanchem1@kean.edu	Penguin25	1975-03-23	business	Delete user
9	Kevin	Parra	parraolk@kean.edu	Kevin415	1999-04-15	individual	Delete user