

Indigenous Go Final Documentation

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Overview

Indigenous go is a progressive web-based application that will encourage BCIT students to explore the BCIT Burnaby campus while learning about plants with special significance to Indigenous people.

Introduction

Team Contact Information

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Stakeholders and Users

- Michal Aibin (Instructor)
 - BCIT instructor who provides guidance and advice throughout the whole project.
- BCIT students

- Target users for the app
- Locating and Discovering native plants that have a significant influence on Indigenous culture using the database while touring/exploring the Burnaby campus.
- BCIT School of Construction and Environment & BCIT Indigenous Services (Client)
 - Sponsor of the project
 - Provide context and ideas of the app, and decide project success.
 - Organizing the Campus waypoints and providing information on Indigenous plants

Project Description

The mobile web application is designed to connect BCIT students to explore the Burnaby Campus for a better understanding of the culture of Indigenous people. This mobile web application allows BCIT students to locate and learn about plants with significant influence in Indigenous culture while exploring the Burnaby campus. It also allows BCIT students to search through a directory by filtering the plants on medicinal use, and significance in Indigenous culture.

The BCIT School of Construction and Environment will also make use of the application. They can use the admin interface to add, change, or remove the information of plants and campus waypoints.

Goals

Basically indigenous go will serve as a walking tour of BCIT Burnaby campus indigenous plants.

This website will provide the following:

- The wayfinding option.
- The platform for learning about indigenous plants and identifying the different species based on their functionality using their photos.
- An admin panel which will help admin to add, delete and edit plants and their information based on the category they belong to.
- Also, the admin will be able to edit the waypoints.
- This website will give access to the admin panel only to the BCIT's admins using login.
- Also, some about BCIT Burnaby campus indigenous life-like storytelling of cider, house post, etc.

Functionality

Login page

The login page authenticates the administrator for the BCIT information administration. It requires you for the email and a password field to log in as the administrator to edit, delete or add information to the web app. Authentication is done through Firebase's email and password authentication. The login page is stored on **login.html**.

As asked of us, we have included two administrator accounts. The two administrator accounts are:

ID: bcitconstruction@gmail.com

Password: Issp2020

ID: bcitindigenous@gmail.com

Password: Indigenous2020

Waypoint page

The waypoint page grabs the waypoint data from firebase and renders it. It is displayed in the **filter.html** page. A user gets the information by clicking on the name of the waypoint. Afterward, a picture of the waypoint will be displayed by pulling the image URL from Firebase. A description will also be below the photo and a button saying "**Find Me!**" will also be there. If they click on the button, they will be redirected to **nav.html** with the X and Y coordinates of the waypoint. The X and Y Coord is sent to the **nav.html** page by including it into the URL.

EXAMPLE: .../index.html?xcoord=49.12645&ycoord=-123.254685

Information administration page

BCIT information administration page lets you edit, delete and add different categories of plants and waypoints once you login as an administrator.

The page is divided into two parts - plants and waypoints. Under plants, there is a dropdown list for every category to choose a plant from, with buttons to add, delete or edit a particular plant.

- Add button: this button provides the field for plant name, plant category, x coordinates, y coordinates, plant description, and plant image.

- Edit button: this button lets you edit the plant type, x coordinate, y coordinate and plant description for the selected plant.
- Delete button: this button lets you delete a plant from the database with a confirmation message.

The buttons work the same for the waypoints as well.

To add a new plant:

- 1) Choose if it is either Food, Medical or Traditional related category

- 2) Click the Add (Category) Plant

The screenshot shows a web application interface with a light green background. At the top, there are two tabs: 'Plants' (selected) and 'Waypoints'. Below the tabs, there are three sections for different plant categories:

- Choose a Food plant:** A dropdown menu shows 'Coastal Strawberry'. Below it are three buttons: 'Add Food Plant' (highlighted with a blue box), 'Edit Food Plant', and 'Delete Food Plant'.
- Choose a Medical plant:** A dropdown menu shows 'Coniferous Tree'. Below it are three buttons: 'Add Medical Plant' (highlighted with a blue box), 'Edit Medical Plant', and 'Delete Medical Plant'.
- Choose a Traditional plant:** A dropdown menu shows 'Lavender'. Below it are three buttons: 'Add Traditional Plant' (highlighted with a blue box), 'Edit Traditional Plant', and 'Delete Traditional Plant'.

- 3) Fill out fields, ***The plant will NOT be added unless all field inputs are filled in***

Clicking **Choose File** will open the Windows File Explorer. You will be able to choose the file that you wish to upload. (Will only accept image type files!)

Add Food Plant

×

PLANT NAME GOES HERE

X COORDINATES GO HERE

Y COORDINATES GO HERE

DESCRIPTION OF THE PLANT

Choose File

IGP.JPG

Confirm

4) Click Submit button to add a new plant

To edit an existing plant:

1) Next to the “Choose (Category) Plant”:

A dropdown list menu will appear. Select one of the existing plants and click on the plant name.

2) Click the “Edit (Category) Plant”

3) You will see the existing information for that plant. You may edit these fields to your liking.

You cannot change the image yet

4) After editing the fields, click the “Save” button to save your choices.

To delete a plant:

1. Next to the “Choose (Category) Plant:”

A dropdown list menu will appear. Select one of the existing plants and click on the plant name.

2. After you decide on which plant to delete, click the Delete (Category) Plant Button
3. After a prompt will be displayed asking if you are sure that you want to delete that plant. IF YOU PRESS OK, IT WILL DELETE THE PLANT. THERE IS NO WAY TO RETRIEVE THAT PLANT UNLESS YOU RE ADD IT.

To add a waypoint:

1. Click the Add Waypoint

2. Fill out fields, ***The waypoint will NOT be added unless all field inputs are filled in***

Add Waypoint

×

Waypoint Name

Waypoint X Coordinate

Waypoint Y Coordinate

Waypoint Description

Choose File

No file chosen

Submit

Clicking **Choose File** will open the Windows File Explorer. You will be able to choose the file that you wish to upload. (Will only accept image type files!)

3. Click Submit button to add a new waypoint

To edit an waypoint:

1. Select the waypoint to edit

2. Click the **Edit Waypoint** button

3. Edit the Waypoint for Coordinates or Description

Edit Waypoint Info



49.2511455

-123.0031097

This house post was commissioned to mark the British Columbia Institute of Technology's 50th anniversary. It was carved by artist Aaron Nelson-Moody/Tawx'sin Yexwulla from a Western Red Cedar log estimated to be over 800 years old.



Save

4. Click the **Save** button to save the changes.

To delete a waypoint:

1. Select the waypoint to delete
2. Confirm you want to delete the waypoint by clicking **Yes**
3. Waypoint has been deleted

Main Page

This page is the main page the user will be directed to when going into the site. It contains the image that will send a user to the story page. Below it, it contains 6 cards that are the featured plants. The picture of the plant as well as the description is displayed there. The featured plants are stored in the database and will generate the code through javascript. This page is stored in the **index.html**

Offline Page

This web app is progressive, we have added an offline page that users will be directed to when they have no internet connection. It will tell the user that they must have internet support in order to utilize the app. This page is stored in the **index_fallback.html**

Plants page

The Plants page shows the lists of different plants with their names, categories, images and required information for the plants. The user can find the plant in the Burnaby campus by clicking on the “more info” which provides the option “Find me” to locate that plant. These cards

are generated by grabbing the data from the Firebase database and creating cards for each plant. This information is stored in **plants.html**

Waypoint Page

The Waypoint page shows the list of different waypoints with their names. After clicking on the name, the user will see the information on the waypoint as well as a picture. This is all retrieved through firebase and displayed on the page. The user can find the waypoint in the Burnaby campus by clicking on the “Find me” button to locate that waypoint. These cards are generated by grabbing the data from the Firebase database and creating cards for each waypoint in the **filter.html** page.

Housepost Page

This page helps display the adventure and journey that the BCIT indigenous team went through to create the housepost waypoint. It grabs imgs in the image folder that the project is hosted on. This page is stored in the **story.html** page.

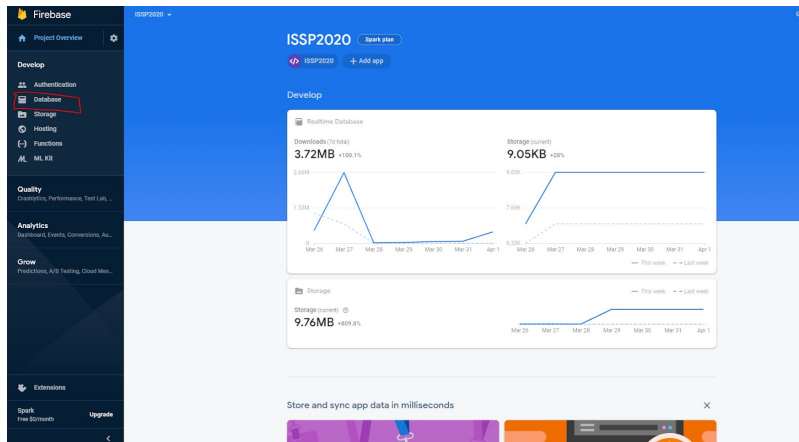
Navigation

Navigation is done through supplying the nav.html page with a latitude and longitude through the URL, then the latitude and longitude will be translated into coordinates for the map. Afterward, the map will then generate a map of corners, calculating the shortest distance to the destination for each individual corner, and then creating a route of corners from the user’s current location to the destination coordinate by leading it through a series of corners. It is stored in **nav.html**

How to access the Firebase Database

1. Go to <https://firebase.google.com/>
2. Click the **Console** button in the top right corner.
3. Login into the BCITConstruction Gmail account.
4. Click the ISSP2020 to access the database

5. On the left hand side, click on **Database**



6. Click **Realtime Database**
7. You will then arrive at the database

How to access the images stored in Firebase

1. Click on **Storage**

2. You will be greeted with two folders. The waypoint folder contains all images for the waypoints. The Plants folder contains all images for the plants.

How to create accounts for login for admin panel

1. Click **authentication** on the left hand side.
2. You will then see a list of all the accounts. **You will not be able to change the id nor password.**
3. Click the **Add User** button to add a user.

4. Enter the email and password in the fields and click **Add User**.

5. The user/account has been created.

Design

For the Indigenous Go website the sponsors did not have an already existing design, so creating a design was a part of the scope of the work. Our sponsors gave us guidance on the constraints and desired stylistic direction of the visual design for the website. They wanted the website to depict indigenous nature.

Our team designers came up with three different design drafts. Our final design is a mixture of all three drafts. The final design includes the following:

- Indigenous color scheme
- Photos and logos depicting Indigenous culture
- Plants with special significance to indigenous culture and different properties

Given below is the sitemap for our website.

Responsive Design

Our web-based application needs to be viewed on a wide range of devices and screen sizes. So it was important to consider how it will look, especially on mobile devices.

We worked on this closely to have our website running successfully on every type of screen size and device.

Accessibility

Since our website only includes indigenous plants of the BCIT Burnaby campus it is accessible to anyone and everyone who visits the BCIT Burnaby campus to explore indigenous plants and their categories. They do not need to sign up to view the website, just open it and are ready to go.

Although, we do have an Admin Panel for admins to add, delete, and/or update plants and/or waypoints to keep the web application up to date.

All Account Information Credentials:

Github:

ID: BCITConstruction@gmail.com

Password: issp2020

Gmail Account:

ID: BCITConstruction@gmail.com

Password: Issp2020

Netlify Account:

Press the Login with Github Button

May ask you to authorize or login to Github. Say yes to authorization

You will then be in the Netlify Account

Out-of-scope Wishlist

- Alternated Reality interactions with indigenous plants.
- Image recognition for plants through the use of the phone's camera.
- Audio storytelling
- Making the map mobile friendly
- Caching realtime data for offline support
- Creating journeys that create a route that allows the user to tour the campus of indigenous objects/plants.