

Project Step 7: Portfolio Assignment

By Ryan Jones and Ruben Sanduleac
Group 30 - CS340 - Winter 2020

Website URL

<http://flip3.engr.oregonstate.edu:8674/home>

Executive Summary

Over the past weeks there were significant number changes that helped move this project along. This project has come a long way from what it started. Every single contribution from the peer reviews helped shape and polish this project. If we were to summarize the main feedback I would say the first couple weeks were the most crucial. The first set of main changes was implemented so the index would link to the home page and fix the homepage in general. The homepage was the cornerstone of the website thus it was the first main change that was done. In addition, one of the main goals of the project was to implement a Search function with the ability to be able to search by location, user, hike, rating etc. At first we wanted to commit without a Login Page, but upon many reviews and criticisms we decided to add the login page. The login page was implemented with the ability to add users and track which user rates which hike.

Overall not far from our initial idea, but a user page provided a more flushed out website. In addition, one of the main questions that came up was "what if a person Deletes their account how would this impact their ratings?" Thus, we decided that if a user deletes his account his ratings must also be gone. The reason why we came to these crucial decisions is that in the real world there are always people who try to skew the information into one side. Thus the ability to purge the website completely of the user would provide a useful benefit. Another key change that was done right away was the ability to remove data from the database, and NULLify a relationship. I think this one allowed for a cleaner flow of data and helped us structure the hiking page and the ratings page. There were many features that we wanted to implement around this. For example a user profile system, but the reality was very simple. We were limited on time. Thus, we did our best, based on excellent user feedback from Piazza and we added a few tables that demonstrated attributes. Attributes like username or a user's first name. There were some ambitious reviews and suggestions like Implementing a way to find hikes based on duration, location and whether there's water nearby. While this was a grand idea it also required significant more time, which was a limiting resource for our group. Thus we decided to implement the core pillars that were required and needed to get the website moving.

The second main set of changes came in the last weeks of working on the project. As we were combining and connecting the database to the website the reviews and suggestions from Piazza were definitely helpful. We only wish we were able to utilize it more if we had the chance. The reason why implementing the database functions was new for us. Thus, it required a significant amount of time for debugging. There were weeks where we had to submit the code even if it was implemented completely. Because of that we were not able to get all the feedback we would have wanted. Nevertheless, SQL query feedback was one of the most crucial ones. We were able to fix many errors in the project based on the feedback such as implementing the INSERT correctly into the database. Furthermore, in step 5 based on feedback, we were able to confirm all the database functions were working correctly. Finally step 6 and 7 were the ones that pushed us the hardest to flush out the functionality that we already have. Yet, we were still able to clean up the UI around the website in step 7 to make the website more user friendly. Overall, our website runs and has all the functionality that is required.

Project Proposal and Outline

Project Overview:

Our database represents a database with different types of hikes that are found throughout the Oregon and Washington Columbia River Gorge area. The Columbia River Gorge is one of the largest natural areas in the United States. The area contains some of the most renowned habitats and environments for wildlife and beautiful scenery. Some examples include areas that are a combination of rain forest and desert, sea-level passages and meadows. The Gorge is a source for hundreds of trails just ready to be explored. This area contains numerous people and different types of locations that people go to on a daily basis. Using this database one will be able to record any hike they want to share with others. The problem that this database resolves is it allows for the recording of the different hikes and an overall rating for each of the hikes. The web provides a visual representation of the hike and yields useful information such as distance, elevation, and difficulty. In addition, this database allows for the individual to plan his or her next hike based on user rating, while being able to check the location of the hike.

The website that our database is connected to has five main pages: Home, Search, Login, Hikes and Ratings. The Home page has short descriptions of the other 4 pages and buttons that link to each one. The Search page allows you to add, edit and delete Locations in the database that Hikes can be associated to. It also shows all current Locations and allows you to search for Hikes based on multiple different Hike attributes. The Login page displays all current users in the database and allows the user to login or add, update or delete an account. The Hikes page displays all Hikes in the database and allows a user to add, edit or delete hikes. The final page, Ratings, allows a user to add, update or delete a rating that is associated with a hike.

Database Outline:

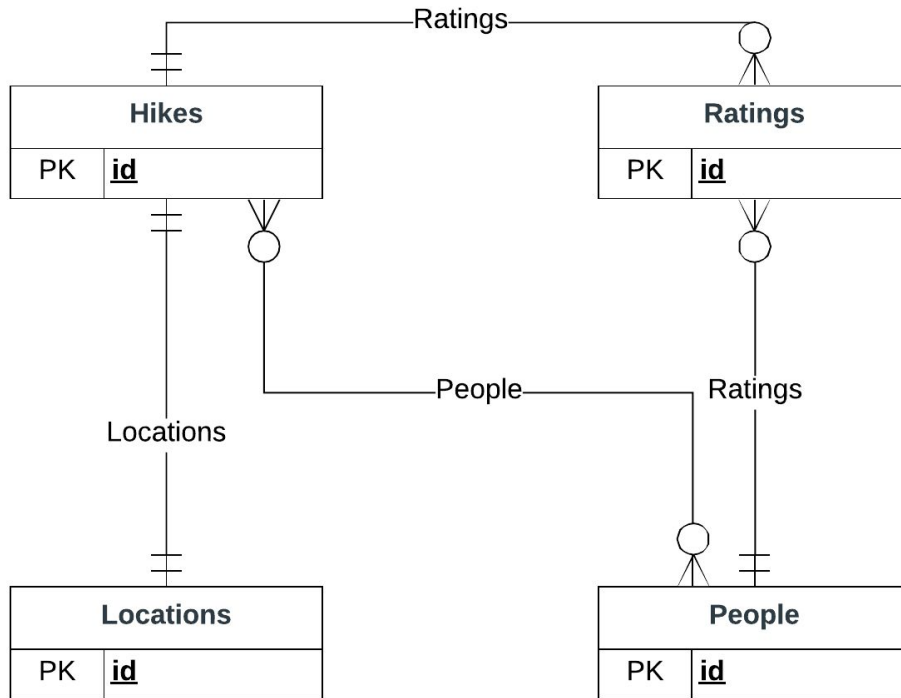
- **Hikes:** records the hike details that are available for people to travel on
 - **hikeID:** int, auto_increment, unique, not NULL, PK
 - **hikeName:** varchar, not NULL. The hike's name.
 - **distance:** double (miles), can be unknown/null
 - **elevation** double (feet), can be unknown/null
 - **difficulty:** int, must be between 1 and 5, can be unknown/null
 - **averageRating:** string, nullable, default 0.
- **People:** records the people that have been registered in the database to travel hikes
 - **peopleID:** int, auto_increment, unique, not NULL, PK
 - **firstName:** varchar, not NULL. The persons first name.
 - **lastName:** varchar, not NULL. The persons last name.
 - **username:** varchar, unique, not NULL. The person's chosen login name
 - **password:** varchar, not NULL. The person's chosen password
- **Locations:** records the details of the locations that have hikes
 - **locationID-** auto increment integer ID up to 10 digits, which will be used to identify the address with a key. Cannot be blank. Default will auto increment the number. PK.
 - Cardinal direction - Cardinal direction portion of the address. Can be North, S, E, W, SW, NE, SE, NW
 - **state** - Is the state where the address is located. Consists of a varchar with a max of 127 characters. Cannot be blank since every address must have a state. Since the hike only exists in one state.

- **city** - The city where the address is located. Consists of a varchar with a max of 127 characters. Cannot be blank since every hike must have a city. Since the hike only exists in one city.
- **zipCode** - This is the zip code describing the location of the address according to the United States zip code postal code. Consists of a var character . Will be 5 digits in length. Cannot be blank since every address has a zip code. There is no Default.
- **hikeID (foreign key)**: int, auto_increment, unique, not NULL
- **Ratings**: records the ratings for the Hike
 - **ratingID**: int, auto_increment, unique, not NULL, PK.
 - **ratingScore**: int, not NULL, must be between 1 and 5
 - **ratingTime**: date, not NULL
 - **hikeID (foreign key)**: int, auto_increment, unique, not NULL
 - **peopleID (foreign key)**: int, auto_increment, unique, not NULL

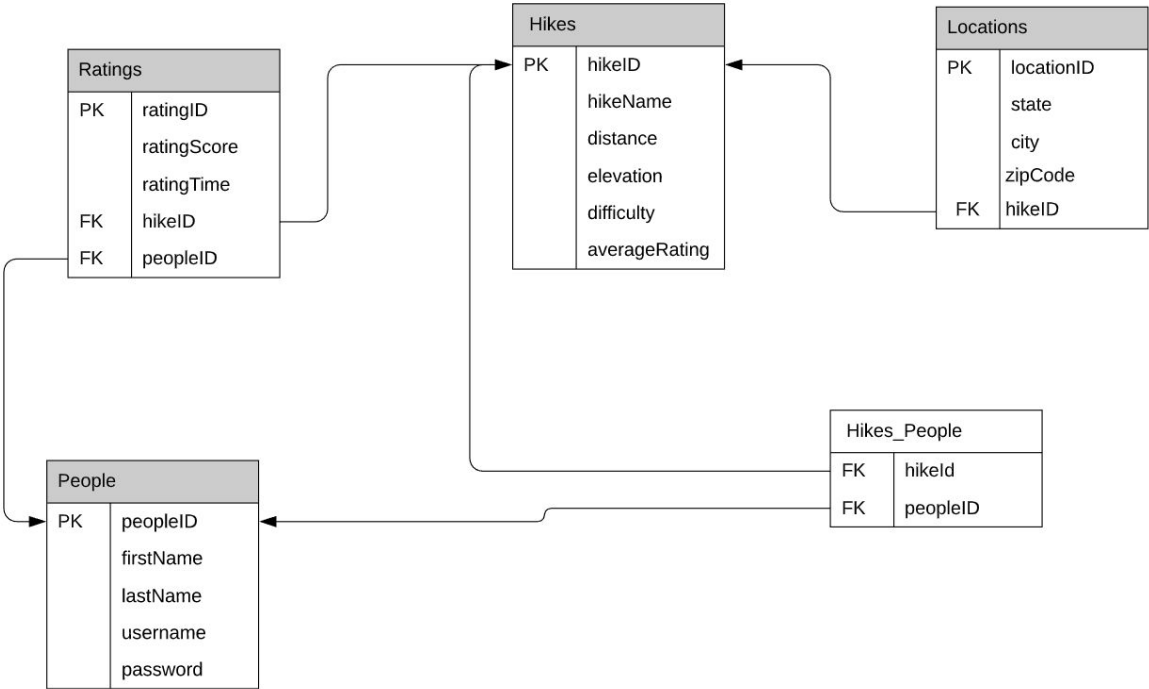
Relationships in database:

- **Locations - (hike -> locations - one to one)**: Exactly one hike can be at exactly one address and vice - versa. Thus the relationship is one to one. Implemented with hikeID as a FK inside of Locations
- **Ratings - (hike -> ratings - one to many)**: Every rating is only connected to one hike but a hike can have multiple ratings. Implemented with hikeID as a FK inside of Ratings
- **Ratings - (people -> ratings - one to many)**: Every rating is only connected to one person but a person can have multiple ratings on hikes. Implemented with PeopleID as a FK inside of Ratings
- **People - (hike -> people - many to many)**: Multiple people can go on the same hike and multiple hikes can be associated with one person. Implemented with HikeID as a FK inside of People

ER Diagram



Schema




UI Screen Shots

BROWSE Home Page:

Hikes of The Pacific Northwest

The Pacific Northwest is home to some of the most beautiful terrain you'll see anywhere in the world. The best part is that anyone can enjoy this scenery as part of the numerous hikes available to the public. We hope you will use this website to share these hikes with others and find new hikes along the way.



Search for an Existing Hike

Search for a hike

Add/Delete a Hike

Add a hike

Delete a hike

Login or Create an Account

Login Page

Rate a Hike

Add a rating

CREATE/READ/UPDATE/DELETE Search Page:

Search for a Hike

Search by address ([Find my current Location](#))

A city, or ZIP code

within 5 miles

or

Search by distance and elevation change

Length:

Elevation:

Search

or

Search by the difficulty of the Hike:

Difficulty (scale 1-5):

1

Submit


or

Search by Rating of the Hike

Rating (scale 1-5):

1

Submit



Add a new Location

Choose a Hike to add a location for: Angel's Rest

State:

City:

Zip Code:

Create Location

Hiking Locations

Hike Name	State	City	Zip Code		
Angel's Rest	OREGON	Bridal Veil	97010	Update	Delete
Triple Falls	OREGON	Cascade Locks	97014	Update	Delete
Munra Point	Oregon	Portland	97045	Update	Delete

CREATE/READ/UPDATE/DELETE Login Page:

Home


Search

Login

Add Hiko

Ratings

Login Page



Login

Username:

Password:

Login

Delete Account

Sign Up

First Name:

Last Name:

Username:

Password:

Create Account

Current User(s) in the Database

Username	First Name	Last Name		
james111	Mark	Jameston	Update	Delete
toto5432	James	Hume	Update	Delete
bondJamesbond	Sean	Connery	Update	Delete

READ/UPDATE Login Page:

Home

Search

Login

Add Hiko

Ratings

Update the User(s) INFO in the Database

Username:

First name:

Last name:

Update

Username	First Name	Last Name
toto5432	James	Hume

CREATE/READ/UPDATE/DELETE Hikes Page:

Home	Search	Login	Add Hike	Ratings	
------	--------	-------	----------	---------	--

Add a Hike

Current Hike(s) in the Database

Name	Distance (miles)	Elevation gain (feet)	Difficulty	Average Rating		
Angel's Rest	4.8	1475	6	4.6	Delete	Update
Triple Falls	3.2	610	4	4.0	Delete	Update
Munra Point	6	2270	9	4.4	Delete	Update
JackieChanAdventures	0.1	1	1	1	Delete	Update

Don't see a hike? Please add a new one or delete an existing one

Name:

How long is the Hike?
Distance:

What is the elevation of the Hike?
Elevation:

What is the difficulty of the Hike?
Difficulty (scale 1-5):

What is the overall Rating of the Hike?
Rating (scale 1-5):

READ/UPDATE Hikes Page:

Home	Search	Login	Add Hike	Ratings	
------	--------	-------	----------	---------	--

Update to the Hike: JackieChanAdventures

Hike Name:

Distance:

Elevation:

Difficulty (scale 1-10):

Rating (scale 1-5):

Name	Distance (miles)	Elevation gain (feet)	Difficulty	Average Rating
JackieChanAdventures	0.1 (miles)	1	1	1

CREATE/READ/UPDATE/DELETE Ratings Page:

Home	Search	Login	Add Hike	Ratings	
------	--------	-------	----------	---------	--

Add a Rating

Choose a Hike to rate:
Angel's Rest

Choose your username:
james111

Enter a Rating (scale 1-5) 1 Create Rating

Hike Name	Rater's First Name	Rater's Last Name	Rater's Username	Rating (1-5)	Rating Date		
Angel's Rest	Mark	Jameston	james111	4	Wed Feb 12 2020 00:00:00 GMT-0800 (PST)	Update	Delete
Munra Point	Mark	Jameston	james111	5	Wed Jun 01 2011 00:00:00 GMT-0700 (PDT)	Update	Delete
JackieChanAdventares	Sean	Connery	bondJamesbond	3	Thu Mar 19 2020 00:00:00 GMT-0700 (PDT)	Update	Delete

READ/UPDATE Ratings Page:

Home	Search	Login	Add Hike	Ratings	
------	--------	-------	----------	---------	--

Update Rating for Angel's Rest

Hike Name	Rater's First Name	Rater's Last Name	Rater's Username	Rating (1-5)	Rating Date
Angel's Rest	Mark	Jameston	james111	4	Wed Feb 12 2020 00:00:00 GMT-0800 (PST)

Updated Rating:
[Update](#)