Team Members: Riley Morris, Dimple Patel, Prathmesh Rathod

Team Name: Health Guide Team-111

Final Report

1. Please list out changes in the directions of your project if the final project is different from your original proposal (based on your stage 1 proposal submission).
    a. Removal of the Map page feature - In the original proposal, there was a plan to include a Map page where users could visualize illness distribution based on different locations in the world. However, this feature was not included in the final presentation. This change in direction is the result of realizing that a map feature brings little value to our end user. We tried to make the site useful and dodged the map feature in the process.
    b. We added a user page with the ability to update or delete account information. This was not included in the original proposal, but after some work it became clear that these were necessary to have a useful site.

2. Discuss what you think your application achieved or failed to achieve regarding its usefulness.
    a. Our application achieved its purpose of identifying illnesses and providing users information related to symptoms and treatments for specified illnesses. It also provides more general illness information such as average age associated with each illness. This information can be useful to users if they are looking to learn more about an illness and who it may affect. By the end it also started implementing the review feature that will allow users to collaborate on their

experiences with an illness. These were all successes. The site did not yet reach the ability to make a user post, which can be viewed as a failure.

3. Discuss if you changed the schema or source of the data for your application
    a. Through this project we kept the source of the data the same and we kept the schema the same as well. No changes.

4. Discuss what you change to your ER diagram and/or your table implementations. What are some differences between the original design and the final design? Why? What do you think is a more suitable design?
    a. We implemented six main tables in this project: Users, Illnesses, Country, Review, Login, and UserIllnesses. These tables were consistent from the original design to the final design. We did not find any reason to alter the schema, and all the tables except for Country are used in the final site. The functionality for Country was heavily tied to the map idea that we pivoted from.

5. Discuss what functionalities you added or removed. Why?
    a. In our initial proposal, we intended to have a map that would display illnesses around the world filtered by age, location, gender, symptoms, or number of cases. Our final project did not include this functionality due to limited time for project completion as well as technical challenges that came with implementing this feature. We added the function to view a summary of average ages associated with an illness and the option to filter searches by illness name and other factors.

This is useful as it allows users to quickly find the information they are looking for.

6. Explain how you think your advanced database programs complement your application.
    a. The advanced queries allow users to perform more complex and detailed searches on the database. This results in a more personalized and relevant experience for users who are trying to find information about their potential illnesses or symptoms. Users can apply filters and constraints to narrow down their search results and better understand the prevalence and characteristics of various illnesses.
    b. The advanced queries enable more in-depth analysis of the data by aggregating, grouping, and filtering the information in various ways. This allows the application to provide users with valuable insights, such as the average age of people affected by a particular illness. These insights can help users make more informed decisions about their health and understand the context of their symptoms or conditions.
    c. The stored procedure allows for users to grab reviews for a specific illness easily. These reviews are also sorted by relevance. This allows for users to get helpful reviews quickly.

7. Each team member should describe one technical challenge that the team encountered. This should be sufficiently detailed such that another future team could use this as helpful advice if they were to start a similar project or where to maintain your project.

a. Riley: One technical challenge I faced was adding team members to the project on GCP. This slowed us from starting the actual coding work. A quick google search of the problem had me looking to add IAM users to the project, but in the wrong location. This meant that I was only adding collaborators to parts of the project we were not working on. To correctly add users, click on the hamburger menu on the top left, select IAM and Admin, select grant access, and type in your groups email addresses.
b. Dimple: One technical challenge I faced while working on this project was accessing the project files in order to add to and view the web service. This issue was resolved by doing cd .. and then entering the directory of the teammate who had set up the NodeJS app on GCP. After performing the steps below, when I ran ls, I was able to view the project folder and access the appropriate files.
    i. Step 1: cd ..
    ii. Step 2: cd teammember2/
c. Prathmesh: One technical challenge I faced was while working on the triggers part, while working with my teammate I realized there were some errors in our syntax and overall trigger. I used stack overflow as a reference to solve the issue. This is the link to a post which helped me. Unlike Prairielearn, the database console needed to change delimiters to run complex queries. https://stackoverflow.com/questions/49929247/how-to-create-a-trigger-in-a-google-cloud-sql-instance-database

8. Are there other things that changed comparing the final application with the original proposal?
    a. Though we discussed identifying illnesses more based on location in the original proposal, in the final application we decided to focus more on illnesses in relation to age and gender. The reason for this is because there is a wide demographic within a country. As a result, it would be more informative to know about an illness based on age and gender rather than location.

9. Describe future work that you think, other than the interface, that the application can improve on
    a. We have Personalized health recommendations in mind for the future. The application could offer personalized health recommendations based on users' symptoms, medical history, and lifestyle factors. This could include preventive measures, diet and exercise suggestions, or mental health support resources.
    b. Enhanced collaboration features: The application could improve its community aspect by adding features that allow users to collaborate, share their experiences, and offer support to one another. This might include forums, private messaging, or social media integration.
    c. Healthcare professional integration: The application could integrate telemedicine features, allowing users to consult with healthcare professionals directly through the app. This could help users access expert advice and potentially receive a more accurate diagnosis or treatment plan.

d. Adding the ability to post reviews. This is a simple, yet clear way to improve user experience on the site.

10. Describe the final division of labor and how well you managed teamwork.

    a. Our team managed the workload through communication over discord.

- Database design: All members
- CRUD queries: All members
- Website development: Riley
- UI Improvements: Dimple
- Stored Procedure: Dimple and Riley
- Trigger: Prathmesh and Riley
- Final Report: Dimple and Prathmesh
- Demo Video: Riley