Final Project Part 3

Section 1. Web App Architecture

1. **where your data is stored: cloud server (e.g. firebase), stand-along (e.g. sqlite)**
   Currently, our data is stored stand-alone and later we will migrate to the cloud.

2. **what languages will be used to build back-end: python, R, javascript, java etc**
   To build the backend, we will be using R and SQL, as we are developing our entire application in RShiny.

3. **how you will be accessing the database: what connections and how secure (e.g. you have admin privileges and users cannot modify stored data etc**
   We are using a Postgres database, and we are connecting that to R using the following packages:
   install.packages("RPostgreSQL")
   install.packages("RPostgres")
   Connecting to the Postgres database as a function call:

```
library(DBI)

db <- "postgres"
db_host <- "localhost"
db_port <- "5432"
db_user <- "<your_user>"
db_pass <- "<your_password>"

conn <- dbConnect(
  RPostgres::Postgres(),
  dbname = db,
  host = db_host,
  port = db_port,
  user = db_user,
  password = db_pass
)
```

   And then we can access the database using the following db.query and execute the required queries in it.

```
dbGetQuery(conn, "SELECT * FROM dailyCalories_merged LIMIT 5")
```

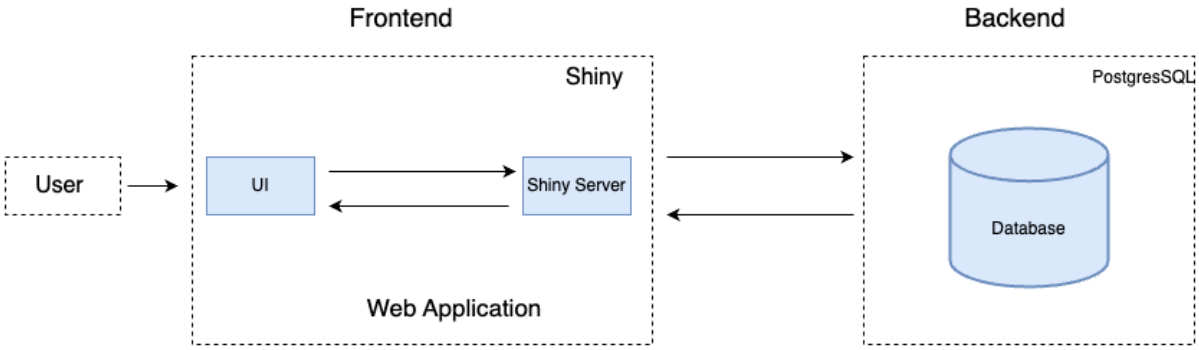
   Only the fitness specialist (Admin of our application) has the ability to delete records; no other users have this capability. And users can only perform create, read, and update operations on their own data, not on the data of other users, because, in our application, users can see data related to that specific user.

4. **what will you use to create a front-end layout (HTML, CSS, js). Consider using Bootstrap (templates for design and layout) - https://getbootstrap.com/**
   For the front end, we will be using R Shiny.

5. **where your application is deployed: shiny server, firebase, heroku, pythoneverywhere**
   Our application is deployed on the shiny server.

6. **and how you will provide interactivity for your app. Note - users should be able to click, select, view etc -**
   If it is an old user, they can log in to our application, see their insights on how they are achieving their fitness goals each day by clicking on the Your Insights page, and can also see visualizations that compare the user's progress with others, and the users can also update and add new activity details of how many steps or calories they burned on that day. When a user is new to our application, they can register via our Register page and gain insights into their data after entering their activity and fitness data into our application.

7. **draw a schema with the web app architecture (see an example) - you can use ppt , draw.io, and other tools to sketch - [add a screenshot to your word document]**



Section 2. Web App Layout

1. **What is the initial layout (when a user sees your app first)?**
   When a user first visits our website, they will see the Login page, which contains two fields for them to enter their email address and password, as well as a navigation menu of pages such as Home, Your Fitness Insights, Update Details, and Logout. The user will be redirected to the application's Home page after successfully logging in.

2. **Where is the menu panel?**
   The menu panel is located in the upper right corner and includes page navigation buttons such as Home, Login, Your Fitness Insights, Update Details, and Logout.

3. **How many pages do you need? Or will you be using Tabs?**
   We now have five pages, which include Home, Login, Your Fitness Insights, Update Details, and Register. Yeah, we will be using tabs and switching between them.

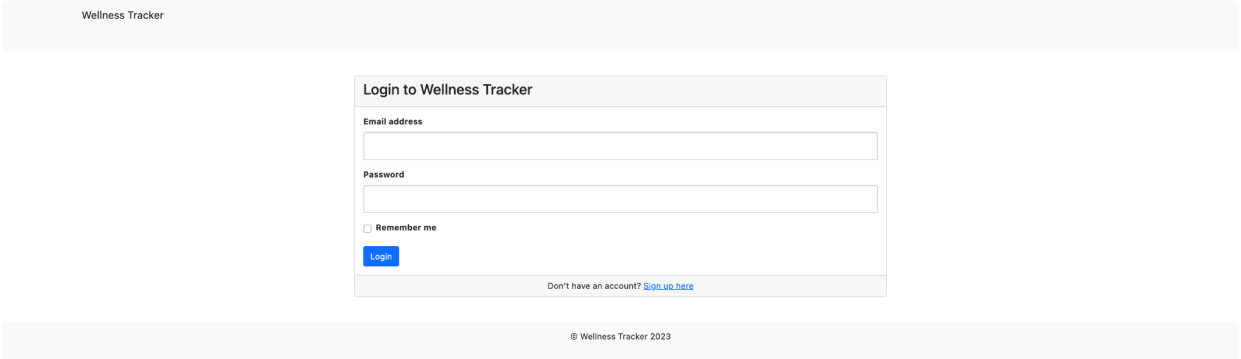
4. **What is the color schema?**
   For now, we are using the default schema provided by Rshiny.

5. **What each page or Tab will display?**
   The home page provides basic information about our application. The login page has a form with fields such as email ID and password, and the register page has fields such as full name, email ID, password, and confirm password. Your Insights page displays various insights (via various visualizations) on user data. Update details display all of the user's data (such as total steps, calories, activity date, and so on) and allow them to perform CRUD operations on it. The logout page/button is simply used to successfully log the user out of the session. To navigate to other pages, all pages have a navigation menu in the upper right corner.

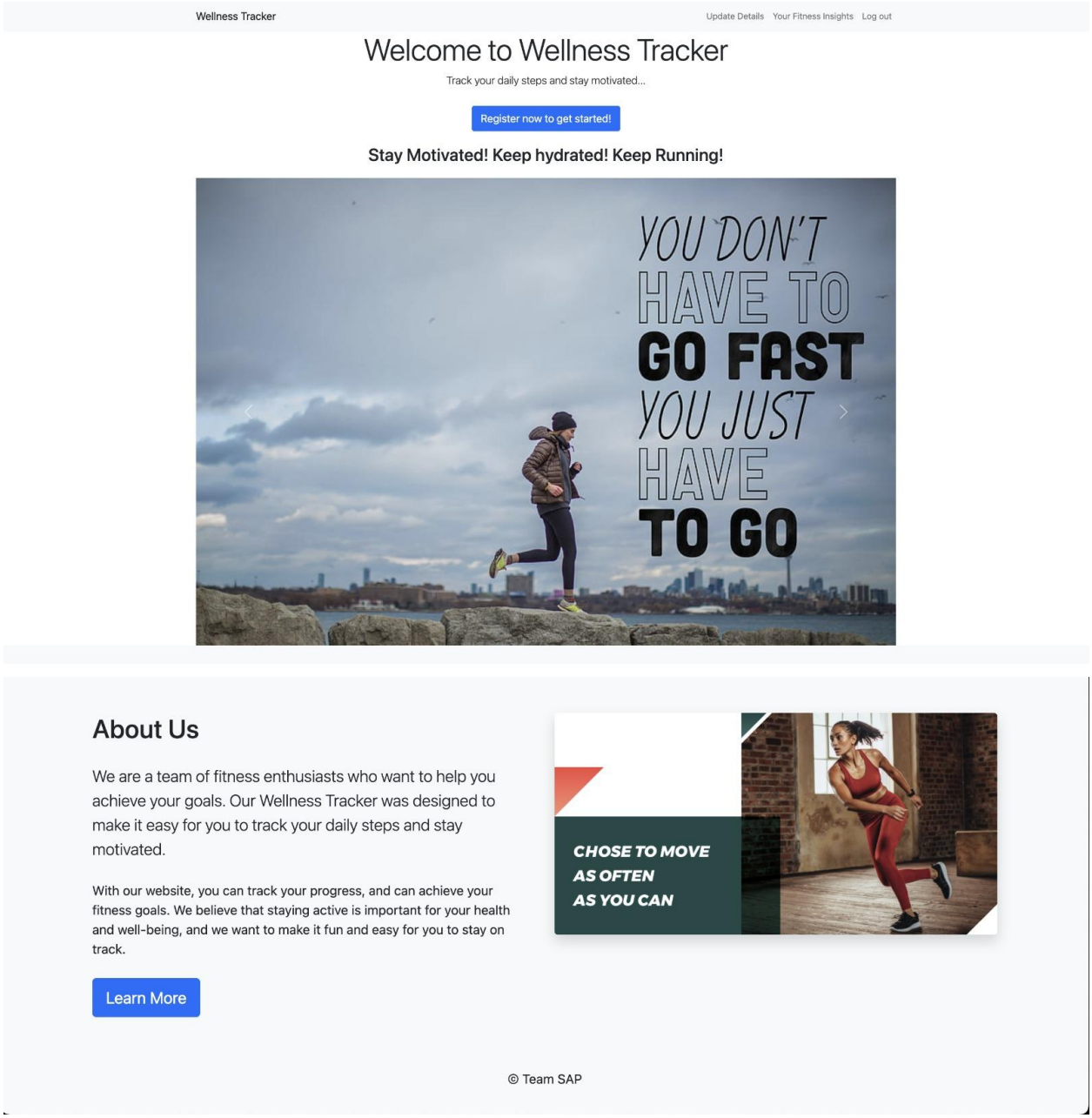
6. **What functionalities will be available and how users will access them (e.g. search/query box/drop menu ...)**
   The home page provides basic information about our application, such as why it is used and who will use it. Your Insights page shows different insights (using different visualizations) on the user data, such as visualizing a plot of total steps for each activity date of a particular logged-in user so that the user can gain insight into how he/she is progressing towards their wellness goal, log in, and Register pages are for securely logging in users to see insights according to their data, Update details display all of the user's data (such as total steps, calories, activity date, and so on) and allow them to perform CRUD operations on it. The logout page/button is simply used to successfully log the user out of the session.

   Screenshots:

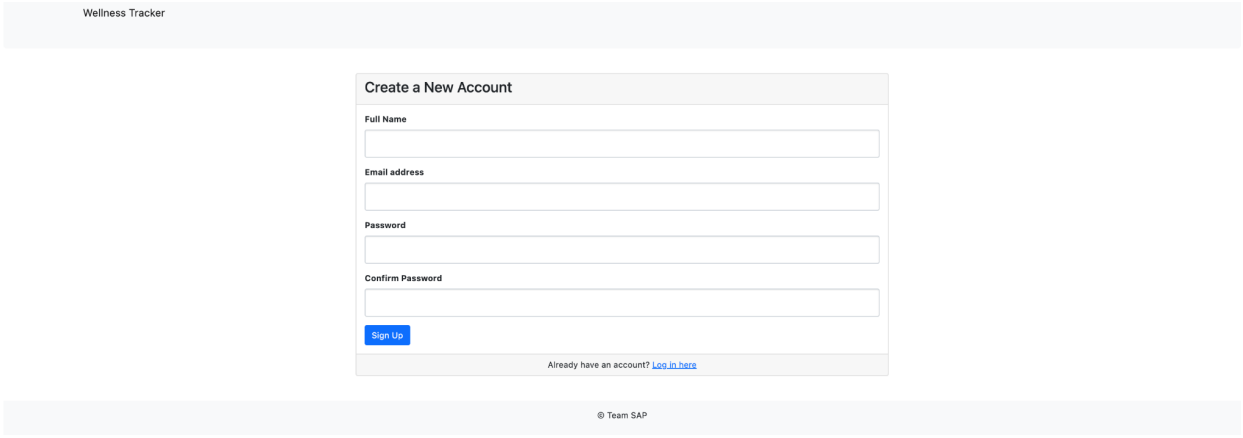
   Login Page:



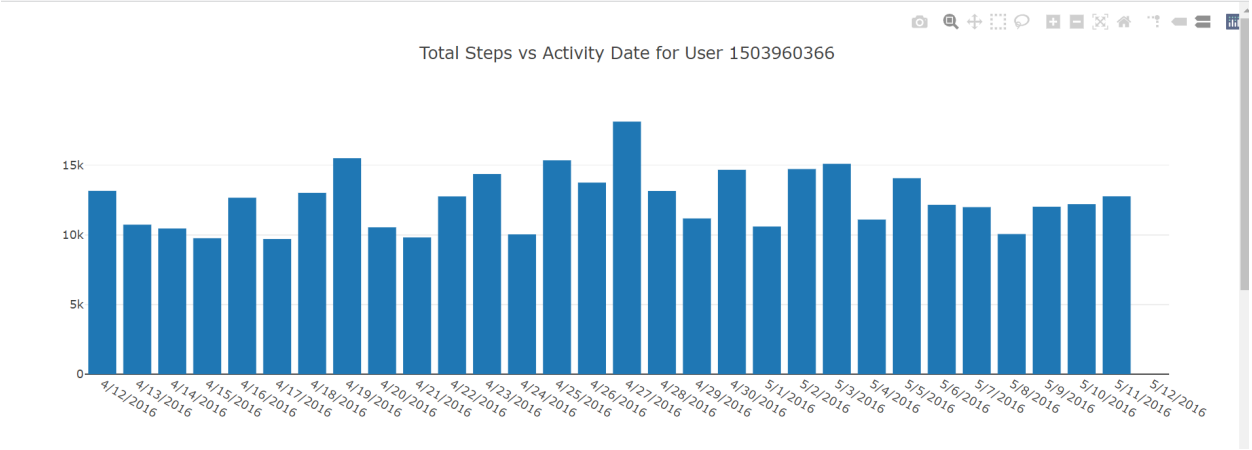
Home Page:


Wellness Tracker
Update Details
Your Fitness Insights
Log out
Welcome to Wellness Tracker
Track your daily steps and stay motivated...
Register now to get started!
Stay Motivated! Keep hydrated! Keep Running!
YOU DON'T HAVE TO GO FAST YOU JUST HAVE TO GO
About Us
We are a team of fitness enthusiasts who want to help you achieve your goals. Our Wellness Tracker was designed to make it easy for you to track your daily steps and stay motivated.
With our website, you can track your progress, and can achieve your fitness goals. We believe that staying active is important for your health and well-being, and we want to make it fun and easy for you to stay on track.
Learn More
CHOSE TO MOVE AS OFTEN AS YOU CAN
© Team SAP

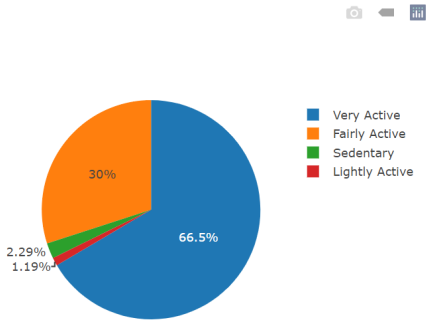
Register Page:

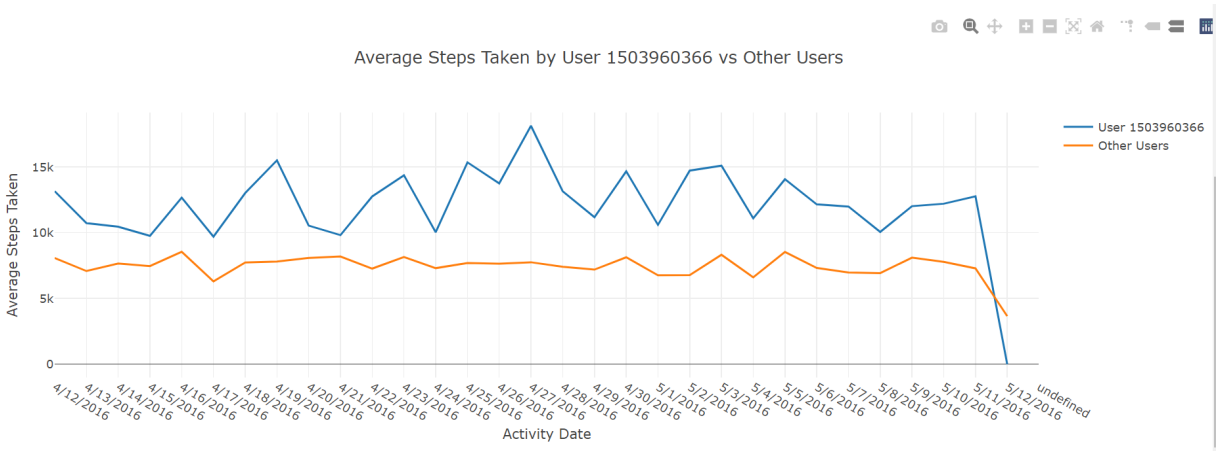


Your Insights Page:



Time spent and calories spent by user "1503960366" on a specific date "4/12/2016"





Update Details Page(CRUD Operations):

Please add/ update calories burnt for the day

Id	ActivityDate	Calories	
10011000123	4/12/2016	1985	Edit Delete
10011000124	4/12/2016	1250	Edit Delete
10011000125	4/12/2016	1312	Edit Delete
10011000126	4/12/2016	895	Edit Delete
			Add Row

Please add/ update steps for the day

Id	ActivityDate	TotalSteps	
10011000123	4/12/2016	13162	Edit Delete
10011000124	4/12/2016	15123	Edit Delete
10011000125	4/12/2016	16123	Edit Delete
10011000126	4/12/2016	12123	Edit Delete
			Add Row

Please add/ update distance covered for the day

Id	ActivityDate	TotalDistance	TrackerDistance	LoggedActivitiesDistance	VeryActiveDistance	ModeratelyActiveDistance	LightActiveDistance	SedentaryActiveDistance	
10011000123	4/12/2016	8.5	8.5	0	1.88	0.55	6.06	0	Edit Delete
10011000124	4/12/2016	2.5	2.5	0.1	1.27	0.43	7.04	0.1	Delete
10011000125	4/12/2016	3.7	3.7	1.0	1.45	0.25	2.3	0.3	Delete
									Add Row

Please add/ update minutes spent in walking for the day

Id	ActivityDate	VeryActiveMinutes	FairlyActiveMinutes	LightlyActiveMinutes	SedentaryMinutes	
10011000123	4/12/2016	25	13	328	728	Edit Delete
10011000124	4/12/2016	34	12	234	943	Edit Delete
10011000125	4/12/2016	65	34	427	765	Edit Delete
						Add Row

Section 3. Individual and Team Work Assessment

Team Lead - Shivani:

Category	Comments
Task Completion	9.5/10. We have completed all the tasks with great collaboration. Each of us is good at completing assigned tasks in the time given.
Teamwork	Excellent teamwork. When one of us is stuck, we all help each other.
Time Commitment	All of us have given 100% effort toward completing the assigned duties.
Improvements	At present, I feel there are no improvements.

Team Member - Abhigna Deverasetty:

Category	Comments
Task Completion	9/10. We have completed the required work with great attention to detail.
Teamwork	Good team efforts in understanding and implementing the required tasks with great detail
Time Commitment	Everyone did a great job but putting in little more efforts would have give us much more to complete the tasks in time
Improvements	As of now, time management with the tasks would help get the best out of everyone.

Team Member - Preetham Vinnamala:

Category	Comments
Task Completion	9.2/10. All the tasks are done as per planned and every member of the team has put in equal amount of efforts
Teamwork	Great team. Enjoyed working with this team. Great learning
Time Commitment	All the team members put in equal amount of efforts and shared the tasks on the go if any of the team members were struggling
Improvements	Need to invest more time to get a better understanding of the shiny application to design the app in a better way