

Color code for each iteration

- **Iteration 1: Black**
- **Iteration 2: Blue**
- **Iteration 3: Purple**

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Requirements Document

Project Name: DineAlert

Requirements and Specification Document

21/07/2021, version 3

Project Abstract

Our DineAlert web application will provide customers and restaurant owners with **three buttons on the home page**. There are two buttons, which allow customers or owners to choose if they're dining (a button) or operating a restaurant (another button). The third button allows customers and restaurant owners to view the location of registered restaurants that are exposed / not exposed to the COVID-19 case on the map. Both customers and restaurant owners will **login** with their username and password. When registering their restaurants, owners will enter the **restaurant name, a unique username and password, and coordinate values** which are used to indicate the restaurant location on the map. The credentials can be chosen by each restaurant owner. Once logged in, restaurant owners have a list of customers with their contact information, including whether they're positive for COVID-19. If any client is positive, **clients who dined at a restaurant the same day as COVID-19 carrier get notified about it**, asking them to isolate and get themselves tested for COVID-19.

Customers will enter their **username, name, their email address** and **password** into a form and will be redirected to a thank you page confirming their submission.

Customer

Our web application involves two main customers, who will often use our application:

1. Restaurant Owners
2. **Diners or customers at the restaurant**

Competitive Analysis

The COVID-19 pandemic has digitized the sign-up process for several restaurants, requiring customers to declare their COVID-19 test results before dining in. Therefore, we believe that our main competitors involve restaurant owners, who have created digitally sign-up forms at their physical locations, which allows customers to report their test results. Our project, which is a web application, allows users to report their test results without having to visit the restaurant personally.

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Compared to our competitors, who require customers to visit a restaurant to sign up, this would save time for customers as well as restaurant owners and reduce the contacts with potential COVID-19 carriers. Furthermore, restaurant owners can easily contact clients directly (using the client information stored in the database) and quickly, sending a mass email rather than individually contacting each customer.

User Stories

Our web application involves the following two actors:

- Customers
- Restaurant owners, who are provided admin permissions to view customer information and send each customer email.

Story 1: Restaurants owner can create an Admin Account (Iteration 1)

The restaurant owner will be able to create an account in order to log in to the DineAlert app. If the restaurant owner uses the DineAlert for the first time, they first click on the "Create account" button, enter the name of the restaurant, username, password and then click on the "Create account" button again to create an account. However, if the username is already taken, they will be prompted to enter a different username. Similarly, if the "Create account" button was clicked without filling out all the fields, they will be prompted to fill out the empty field(s) - **name of the restaurant, username, password and coordinates of their location**. If an account is successfully created, the user information will be submitted to the DineAlert, with a success page confirming the creation of the account.

Acceptance test:

Once account information is submitted, a new row will be created on the Restaurants table, which contains the restaurant owner's restaurant name, username and password.

Story 2: Admin Login (Iteration 1)

The restaurant owner will be able to login into the system and view a list of customers, who are positive. This is not accessible to other customers, who visited the restaurant. If the restaurant owner has an account for the DineAlert, they will be able to log in from the login page. On the login page for the restaurant owner, they enter username, password and then click on the "Login" button. However, if the "Login" button was clicked without entering both username and password, they will

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be prompted to fill out the empty field(s). If the correct information is typed in, the restaurant owner will be taken to the diner information page with the message "Logged in!" If not, the restaurant owner will be notified that either the username does not exist or the password is wrong.

Acceptance test:

Once username and password are typed in, the restaurant owner will be authenticated by searching through the Restaurants table, checking if the provided username exists and if it matches with the provided password. If successfully passed authentication, the page will be redirected to the home.html file, which is the diner information page.

Story 3: Customer can create an Diner Account(Iteration 1)

The customer will be able to create an account in order to log in to the DineAlert app. If the customer uses the DineAlert for the first time, they first click on the "Register with DineAlert" button, enter the username, name, email address, password and then click on the "Create account" button to create an account. However, if the username is already taken, they will be prompted to enter a different username. Similarly, if the "Create account" button was clicked without filling out all the fields, they will be prompted to fill out the empty field(s). If an account is successfully created, the user information will be submitted to the DineAlert, with a success page confirming the creation of the account. **Also, customers will enter the name of the restaurant that they are dining at.**

Acceptance test:

Once account information is submitted, a new row will be created on the Diners table, which contains the customer's username, name, email address and password.

Story 4: Diner Login(Iteration 1)

If the customer has an account for the DineAlert, they will be able to log in from the login page. On the login page for the customer, they enter username, password and then click on the "Login" button. However, if the "Login" button was clicked without entering both username and password, they will be prompted to fill out the empty field(s). If the correct information is typed in, the customer will be taken to the page where they fill out a dining report form. If not, the customer will be notified that either the username does not exist or the password is wrong.

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Acceptance test:

Once username and password are typed in, the customer will be authenticated by searching through the Diners table, checking if the provided username exists and if it matches with the provided password. If successfully passed authentication, the page will be redirected to the diningreport.html file, which is the page for the customer to fill out a dining report form.

Story 5: Adding a Dining(Iteration 1)

The customer will be provided with a form to fill out for them to receive COVID-19 alert notification in the future. After the customer logged in to their DineAlert account, they will be taken to the page that contains fields to fill out. On this page, the customer will enter their name, name of the restaurant, email address and then click on the "Submit" button to submit the information they provided. However, if the "Submit" button was clicked without filling out all the fields, they will be prompted to fill out the empty field(s). If all required fields are filled, provided information will be submitted to the DineAlert.

Acceptance test:

Once account information is submitted, a new row will be created on the Dinings table, which contains the customer's name, name of the restaurant and email address.

Story 6: Admin Logout(Iteration 1)

The restaurant owner will be able to successfully log out from their DineAlert account. When the restaurant owner is on the diner information page, they can simply click on the "Log Out" button to log out from their account. Once this button is clicked, they will be taken to the admin login page where they enter login details.

Acceptance test:

As the owner may be logged in, upon clicking the "Log Out" button, the user will be redirected to the index.html file, which is the homepage.

Story 7: Delete Diner(Iteration 1)

The restaurant owner will be able to remove a specific diner from their diner information list. There will be the "delete" button next to each diner on the diner

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information list. If the restaurant owner wants to remove a specific diner, they can click on this button, and the diner will no longer be on their list.

Acceptance test:

Once the restaurant owner clicks the “delete” button, the row that contains information about the diner whose “delete” button was clicked will be deleted from the Dinings table.

Story 8: Return to Home Page(Iteration 1)

The restaurant owner and customer will be able to return to the home page whenever they want. Whether they are on the login or create an account page, they can simply click on the “Return to home” button to go back to the home page. Once the button is clicked, they will be taken to the home page where they choose if they are dining or running a restaurant.

Acceptance test:

Once the restaurant owner or a customer clicks the “Return to home” button, the page will be redirected to the index.html file, which is the homepage.

Story 9: Report the Covid-19 positive test result (Iteration 2)

As a customer, I want to report the Covid-19 positive test result so that I can notify restaurant owners that a person with Covid-19 dined at their restaurant.

User: Customer

Pre-condition: I tested positive for Covid-19 and have dined at a restaurant.

Action: I fill in the username and password fields with my credentials and I click the Report Covid-19 button.

Post-condition: Restaurant owners get notified that a customer tested positive for Covid-19, providing the customer details (credentials such as username, name and email).

Acceptance Criteria: Given that I am a customer (diner) and I am on the positive test result reporting page when I fill in the username and password sections with my credentials and I click the Report Covid-19 button, then the system sends the report to restaurant owners.

Acceptance test: When the report is successfully sent to restaurant owners, exposure entry in the table gets updated, and the boolean value changes from false

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to true. In CovidReportTest.java, the email address associated with entered username is used to grab the boolean value for the column exposed in the Dinings database where information of customers who dined at restaurants is stored. Then if the grabbed boolean value is true, it is determined that the Covid-19 positive test result is successfully sent.

Story 10: Raise an error if customers try to report the Covid-19 positive test result when they haven't dined at a restaurant (Iteration 2)

As a customer, I do not expect to be able to report the Covid-19 positive test result if I have not dined at a restaurant yet.

User: Customer

Pre-condition: I tested positive for Covid-19 but have not dined at a restaurant.

Action: I fill in the username and password fields with my credentials and I click the Report Covid-19 button.

Post-condition: Raise an error message that confirms that I have not dined at a restaurant yet.

Acceptance Criteria: Given that I am a customer (diner) and I am on the positive test result reporting page when I fill in the username and password sections with my credentials and I click the Report Covid-19 button, then an error message that confirms that I have not dined at a restaurant yet appears.

Acceptance test: When the Report Covid-19 button is clicked, the system searches through the Dinings database to see if entered username's associate information exists and if not, and the error message appears. In CovidReportNoDiningTest.java, the email address associated with entered username gets checked to see if it is registered in the Dinings database where information of customers who dined at restaurants is stored. If the email address doesn't exist in the Dinings database, then it is determined that a customer hasn't dined at a restaurant.

Story 11: Improvement on Story 1 - Create an admin account even if there is no customer dined yet(Iteration 2)

As a restaurant owner, I want to create an admin account even if no one has dined at my restaurant.

User: The restaurant owner

Pre-condition: No customers have dined at my restaurant

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Action: I fill in the restaurant name, username and password fields and I click the Create Account button.

Post-condition: Admin account is successfully created

Acceptance Criteria: Given that I am the restaurant owner and I am on the create an admin account page when I fill in the restaurant name, username and password sections and I click the Create Account button, then an admin account is successfully created.

Acceptance test: When an admin account is successfully created, account information gets stored in the Restaurants database.

Story 12: Persist login session until deliberate logout (Iteration 3)

As a customer / restaurant owner, I want to stay logged into my account until I log out by myself.

User: Customer / restaurant owner

Pre-condition: I am logged into my diner / admin account

Action: I close or refresh the page

Post-condition: I am still logged into my diner / admin account

Acceptance Criteria: Given that I am a customer / restaurant owner and I am logged into my account and am on the diner / admin home page when I refresh the page, then I am still logged into my account. Similarly, when I close the page, open the page again, and click the diner / restaurant owner button, then I am still logged into my account.

Acceptance test:

Story 13: Show customers and restaurant owners the location and the name of registered restaurants that are exposed / not exposed to COVID-19 case (Iteration 3)

As a customer / restaurant owner, I want to be able to view DineAlert restaurants nearby, especially those with possible COVID-19 exposures.

User: Customer / restaurant owner

Pre-condition: Restaurants are registered to DineAlert app

Action: I click the map button

Post-condition: Map displays the location and the name of restaurants that are exposed / not exposed to COVID-19 case

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Acceptance Criteria: Given that I am a customer / restaurant owner and I am on the general home page when I click the map button, then the map displays the location and the name of restaurants that are exposed / not exposed to COVID-19 case.

Acceptance test: Restaurants with a red marker denote that there may be a possible COVID-19 case at that location whereas restaurants with a green marker denote that there has been no COVID-19 exposure.

Story 14: Notify customers about the Covid-19 case in a restaurant (Iteration 3)

As a customer, I want to be alerted when I login to my account if there was an exposure somewhere I dined at in the last two weeks.

User: Customer

Pre-condition: There was the Covid-19 case in a restaurant that I visited in the last two weeks

Action: I log into my diner account

Post-condition: The alert message about where and on what day I may have been exposed appears on the page

Acceptance Criteria: Given that I am a customer and I am on the diner login page when I fill in the username and password sections and I click the login button, then the alert message about where and on what day I may have been exposed to the Covid-19 case appears on the diner home page.

Acceptance test:

Story 15: (Iteration 3)

User:

Pre-condition:

Action:

Post-condition:

Acceptance Criteria:

Acceptance test:

Future Story 1: Report test results for COVID-19 (discussion for future iteration) *Completed in iteration 2

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The customer will be able to report their result for the COVID-19 test. Once they are logged into their account, they can click on the “I have test result” button and then there will be a checkbox to indicate the test result and a field to enter the name of the restaurant. If their result for the COVID-19 test was positive, they can report the result by clicking on a checkbox, entering the name of the restaurant and then clicking on the “Submit” button. However, if the “Submit” button was clicked without completing the required fields, they will be prompted to fill out the empty field(s). If all required fields are completed, provided information will be submitted to the DineAlert, and a reporting email will be sent to the restaurant owner.

Acceptance test:

Once account information is submitted, information about the test result will be recorded in the customer’s row on the Dinings table. *Acceptance test for sending an email has not been decided

Future Story 2: Send out COVID-19 notification email to customers(discussion for future iteration) *We changed our plan from email to some other form (undecided) of notification. See the future story 3 below

The restaurant owner will be able to email all customers about a carrier of COVID-19 in the restaurant to instruct them to get tested and self-isolate for a stipulated time. If the restaurant owner receives a COVID-19 notification email from the customer (carrier), based on what time the carrier visited the restaurant, they can send out an email to those who were at the restaurant within a few hours to a day (time frame hasn’t been decided) from that time. Once the restaurant owner is logged into their

Acceptance test: *Plan changed. See the future story 3 below

Once the restaurant owner clicks the “Send” button, the page will be redirected to the sent.html file, which is the confirmation page for the delivery of an email. *Acceptance test for sending an email has not been decided

Future Story 3: Notify customers about the Covid-19 case in a restaurant (discussion for future iteration)

As a restaurant owner, I want to notify my customers about the Covid-19 case in a restaurant so that they will be reminded to get tested and self-isolate for a stipulated time.

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User: The restaurant owner

Pre-condition: A customer has reported that they tested positive for Covid-19 and I received the report and am logged in

Action: I click the Alert customer button

Post-condition: Customers who dined the same day as Covid-19 carrier get notification

Acceptance Criteria: Given that I am the restaurant owner and I am on the admin home page once logged in when I click the Alert customer button, then the system sends notification about the Covid-19 case in my restaurant to customers (diners) who dined the same day as Covid-19 carrier.

Acceptance test: *Acceptance test for sending notification has not been decided

Velocity Measurement and Improvements to the process from previous iteration

Improvement on Story 1 from iteration 1 - Story 11: Fixed the bug where restaurant owners cannot create an admin account when no one has dined at their restaurants.

Story points:

- Story 9: 3pt
- Story 10: 2pt
- Story 11: 1pt

Velocity (Avg number of points / week):

- $((3 + 2 + 1) / 3) / 2 = 3\text{pt}$

User Interface Requirements

Initially, the user (customer/restaurant owner) will be provided with two buttons, depending if they're dining or running a restaurant. Restaurant owners will be directed to a login page, with a registering account button ('Create account').

- **Sketches of interfaces**
 - a) **Restaurant owner interface**

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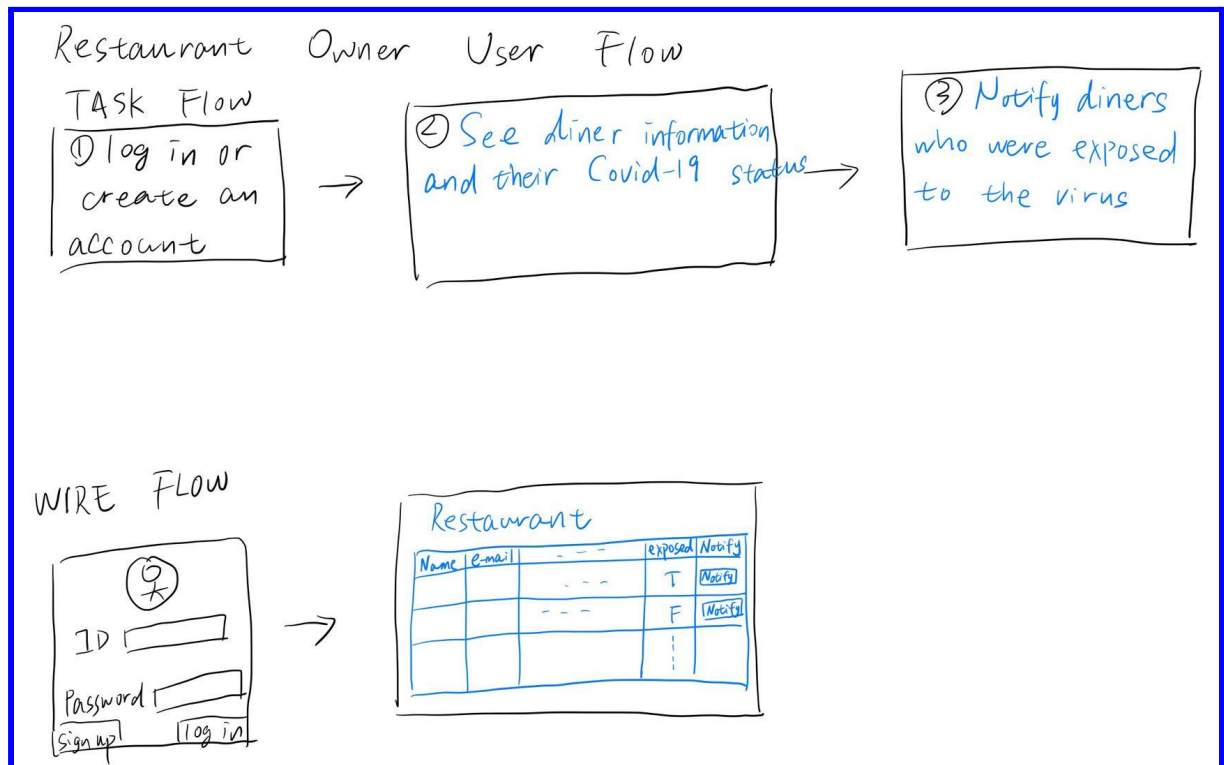
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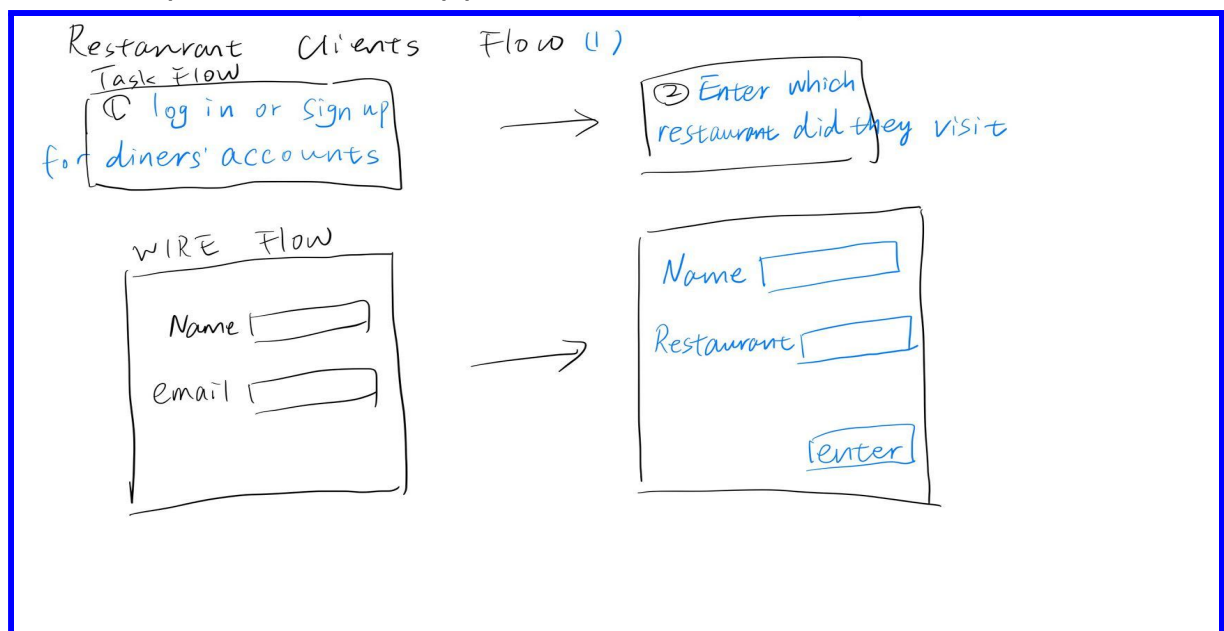
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b) Client Interface (1)



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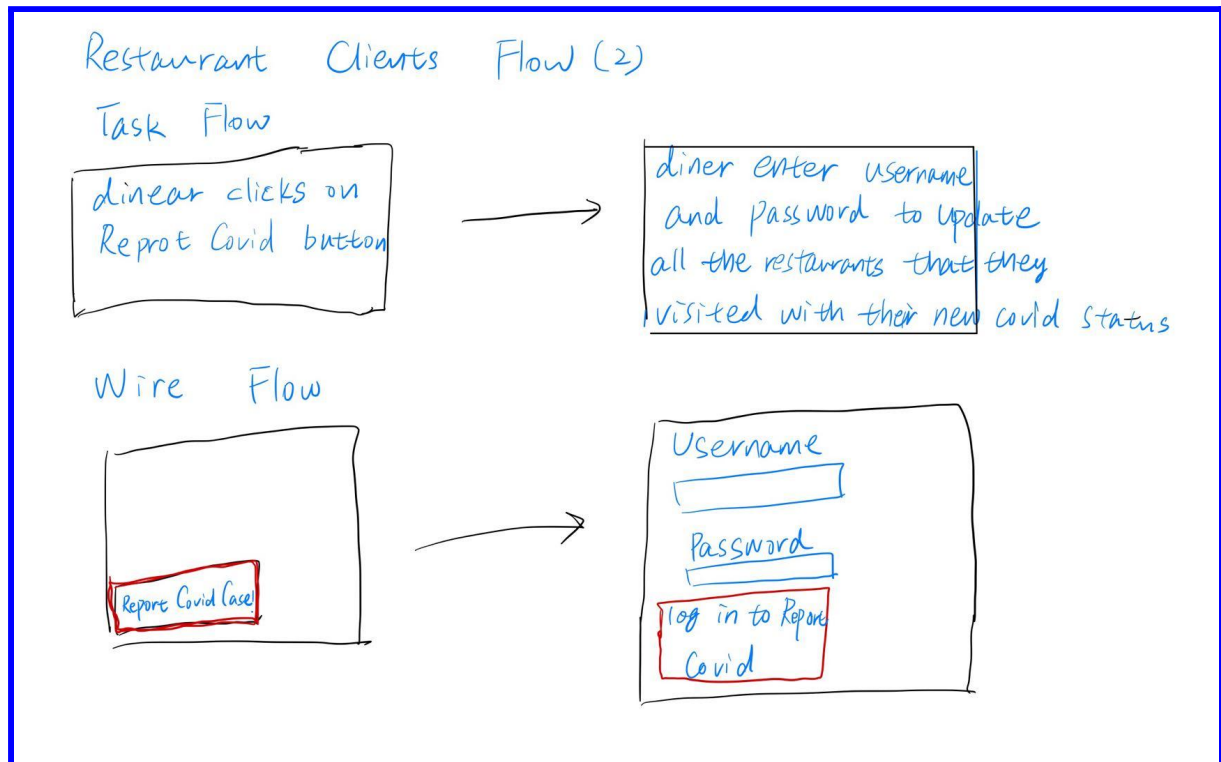
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c) Client Interface (2)



Some Screenshots of working app

- Homepage

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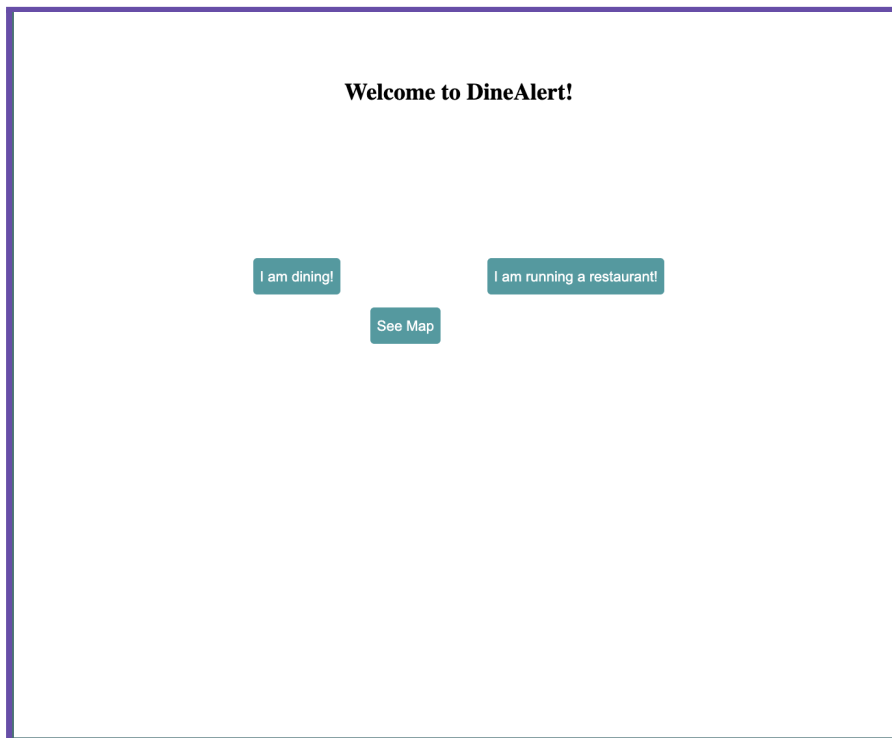
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- **Left Button (Customers) “I am dining!”**

- Redirects to login page, which is used by customers

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localhost:5000/dinerloginpage

Please log in to your DineAlert account.

Username

Password

Log in

Return to home

Register with DineAlert

When the customer clicks on **Register with DineAlert**, he or she is redirected to another page, where they register their account, as shown below:

Register yourself on DineAlert!

Username

Name

Email

Password

Create account

Return to Homepage

Back to Diner Login

Once they register, they are redirected to the **login page**

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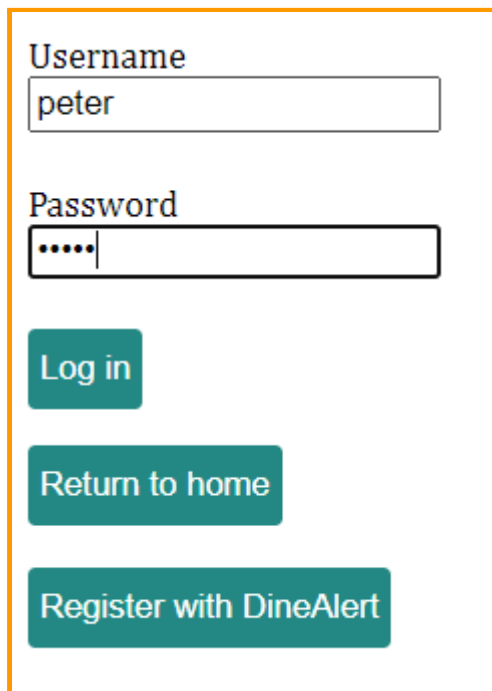
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A login form interface with a white background and an orange border. It contains the following elements: a 'Username' label above a text input field containing 'peter'; a 'Password' label above a password input field with five dots; a 'Log in' button; a 'Return to home' button; and a 'Register with DineAlert' button.

LOGGED IN:

Once the diner logs in, they enter the restaurant's name and may be notified if they've been exposed to COVID-19.



A logged-in interface with a white background and an orange border. It contains the following elements: a 'Restaurant' label above a text input field containing 'Restaurant'; a 'Return to home' button; a 'Log out' button; and a button labeled 'I have tested positive for COVID-19'.

- **Alert message for the exposure to the Covid-19 case**

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Upon the login, if the diner dined at a restaurant the same date as Covid-19 carrier, the alert message about the date and the name of the restaurant where the diner may have been exposed to the Covid-19 case appears

Welcome to the DineAlert diner homepage!

Restaurant
Restaurant

You may have been exposed to COVID-19 on FRIDAY, AUGUST 6 at Tacobell!

Return to home

Log out

I have tested positive for COVID-19

SUBMITTED:

Once the customer fills the restaurant name and submit the form, Thank you message will appear.

Thank you! Enjoy your meal.

Return to home

Errors possible when registering a client account:

1. Duplicate username - Need to have a unique username
2. Duplicate email address - Unique email as well

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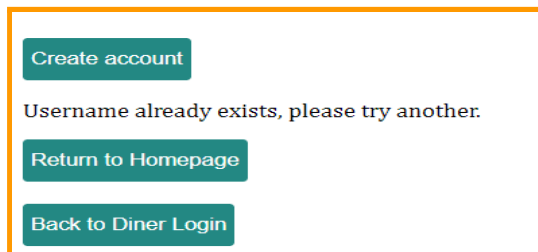
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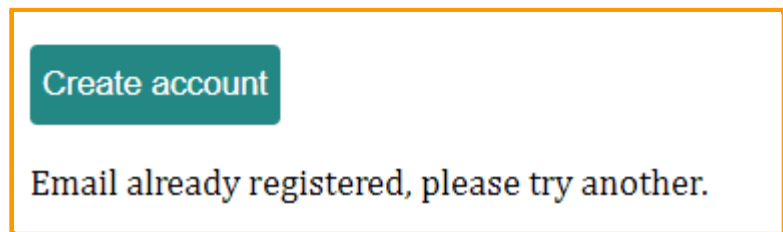


Create account

Username already exists, please try another.

Return to Homepage

Back to Diner Login

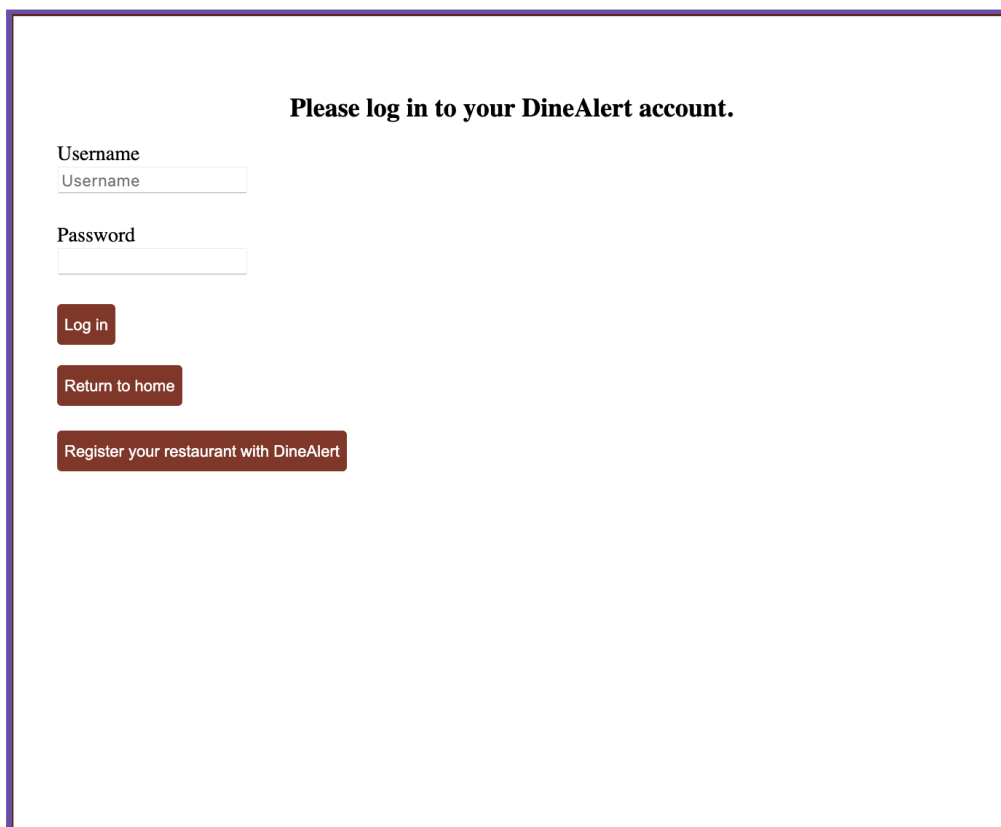


Create account

Email already registered, please try another.

- Right Button (Restaurant owners) "I am running a restaurant!"

- **First login page is displayed**



Please log in to your DineAlert account.

Username

Password

Log in

Return to home

Register your restaurant with DineAlert

- **Creating account for restaurant owners**

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Register your restaurant on DineAlert!

Restaurant Name

Tacobell

Username

taco

Password

....

Coordinates

120.0

40.0

Create account

Return to Homepage

Back to Admin Login

- **Once logged in restaurant**

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Welcome to the DineAlert restaurant homepage!

Recent Dinings at your restaurant

ID	Name	Email	Time	Date	Exposed	
9	red	red@gmail.com	07:27:06	2021-08-06	f	DELETE
10	purple	purple@gmail.com	07:27:52	2021-08-06	t	DELETE

[Return to Home](#)

[Log out](#)

Errors possible when registering a restaurant:

- Need to have a unique username

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Register your restaurant on DineAlert!

Restaurant Name

Username

Password

Coordinates

Create account

That username is already in use, please try another.

Return to Homepage

Back to Admin Login

- **See Map button**
 - **Redirects to the map page, which is used by both customers and restaurant owners**

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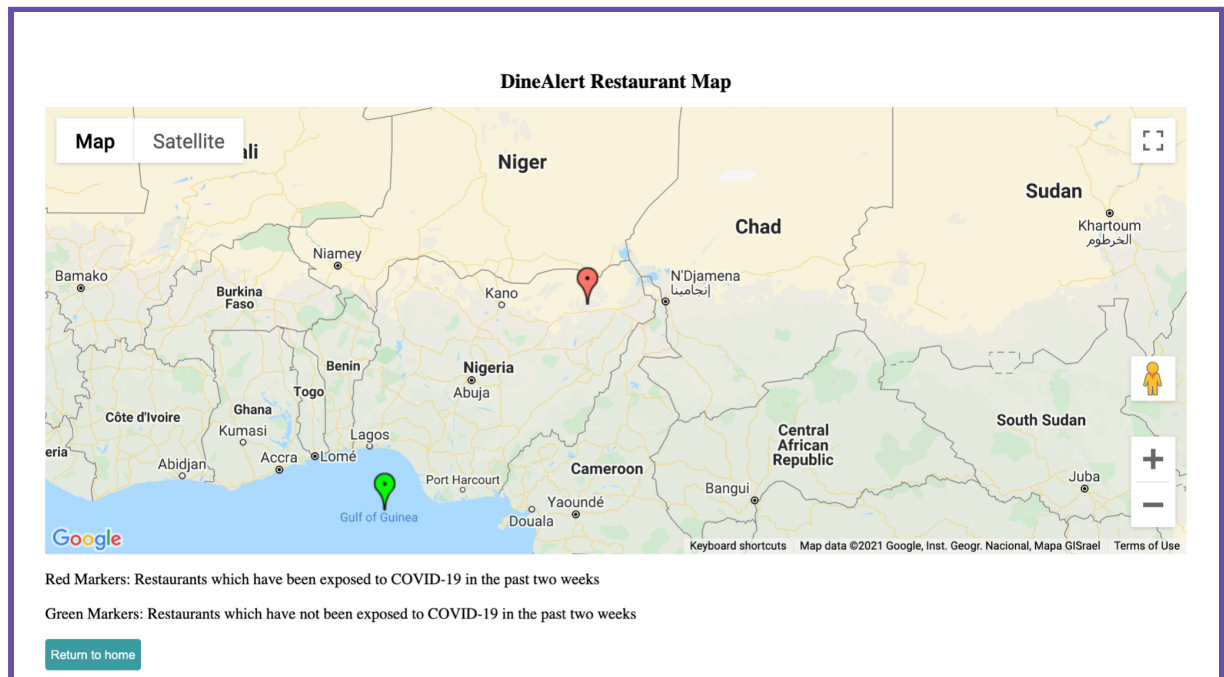
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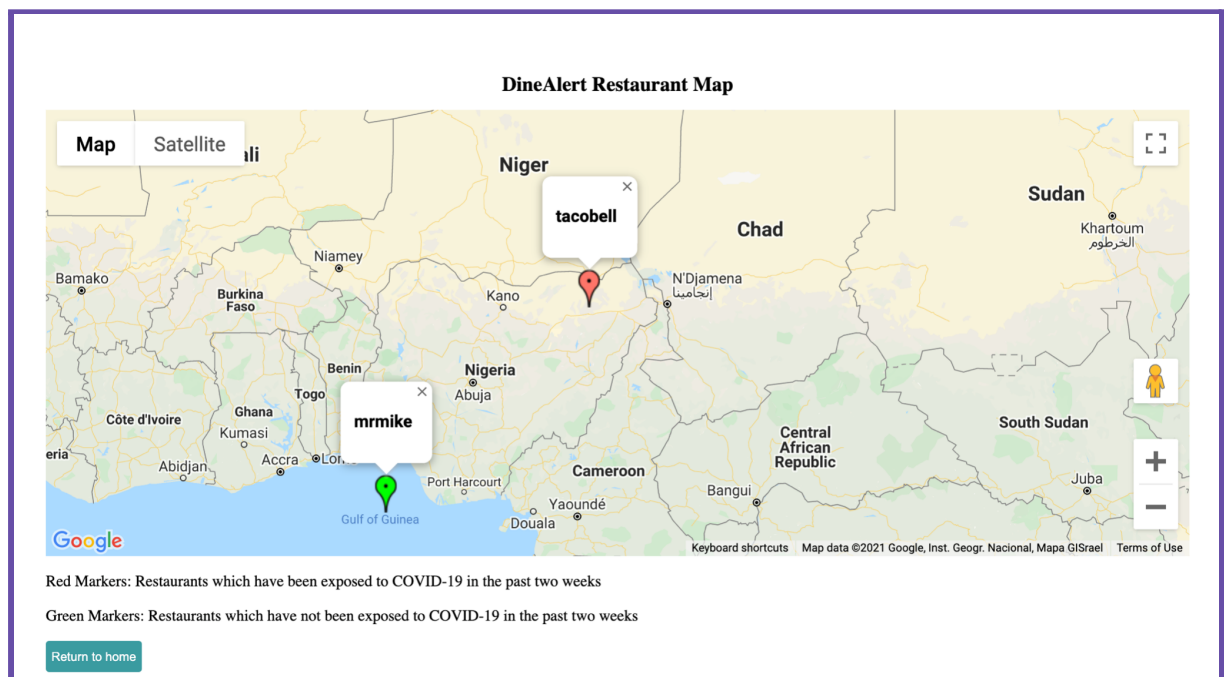
Gaelan O'Shea-McKay 301267831

Markus Robinson 301358252

Zhiran (Andy) Tong 301390137



Customer / restaurant owner can click on the marker, and then it will show the name of the registered restaurant



Color code for each iteration

- **Iteration 1: Black**
- **Iteration 2: Blue**
- **Iteration 3: Purple**

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