TRAZE

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USER MANUAL

Disclaimer

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Getting Started

Introduction

This is the user manual for Traze, a delivery services mobile app. This app is designed to make the delivery process easier and more convenient for both customers and delivery personnel. With this app, you can track deliveries, schedule deliveries, and manage your account all from the palm of your hand. In this manual, you will find detailed instructions on how to use all the features and functions of the app, so you can make the most of your delivery experience.

System Requirements (Android)

Operating System: Android 11
Processor: Octa-core 2.3 GHz
Ram: 4GB

Installation

1. To download the application, please follow the link provided: (https://github.com/Mariaarlyn14/Traze/releases/latest/download/Traze.apk). By accessing the link, you will be directed to the latest release of the Traze application. From there, you can proceed to download the Traze.apk file and install it on your Android device.
2. Enable unknown sources: Go to "Settings" > "Security" > "Unknown Sources" and toggle the switch to allow installation of apps from sources other than Google Play Store.
3. Install the APK: Tap on the APK file and follow the on-screen instructions to complete the installation process.

System Requirements (Windows)

Operating System: Windows 10/11
Processor: 2Intel(R) Core(TM) i5-10210U CPU @ 1.60GHz 2.11GHz
Ram: 8GB

Usage

Welcome page

The homepage consists of the Application's logo and a continue button. Pressing the Continue button will direct the user to the Login Page
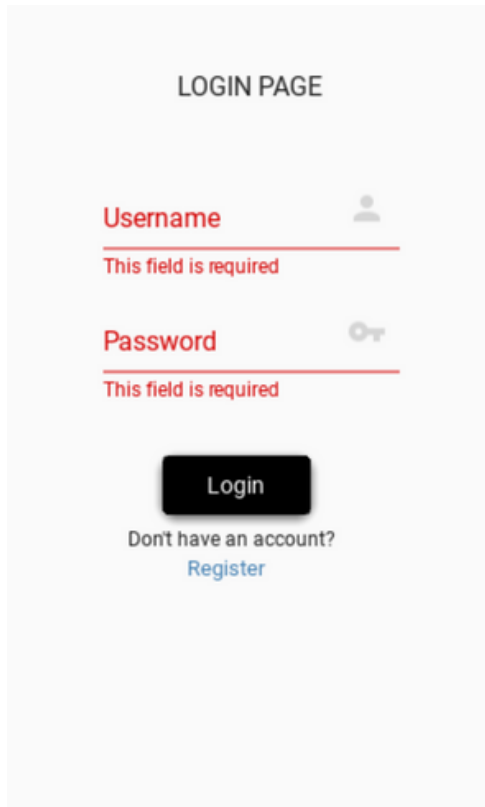

This is the Welcome Page

Clicking "Continue" will direct the user to the Login Page

Login page

The login page is where the user will enter their username and password in order to access the application's features, clicking on it will direct the user to their role pages which are either Delivery Person, Seller, or Customer. It also has a register hyperlink where the user will be redirected to the Signup page if the user has no existing account.
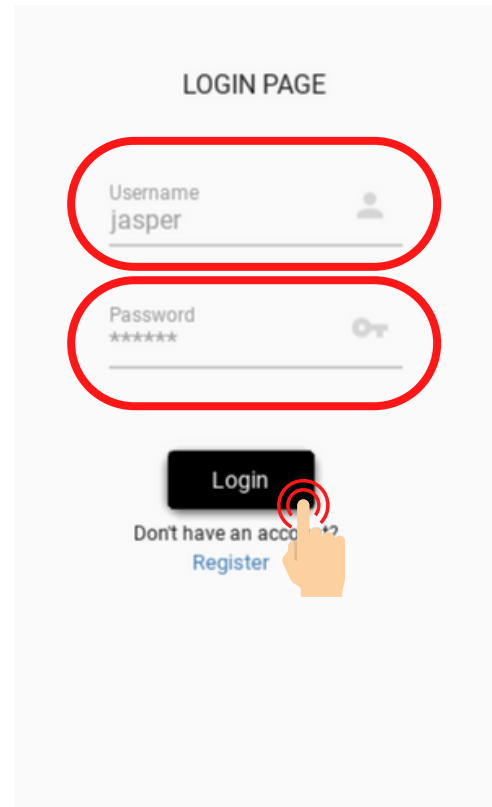
This is the login page that displays the required fields to be filled in.
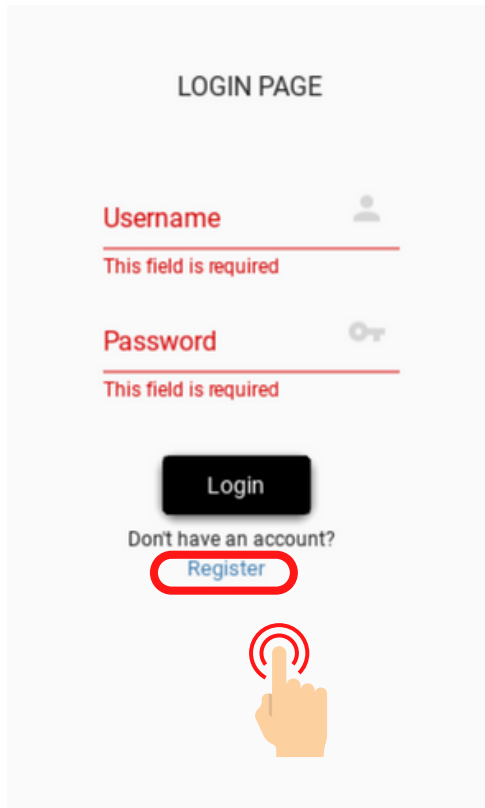
Enter your username and password before pressing Login to have access to your account

Sign Up page

The Sign up page is for new users where they can enter their credentials which will be stored in the database after pressing register. Pressing on "Select Type of User" will give a dropdown list of types of users which are: Customer, Seller, and Delivery Person.

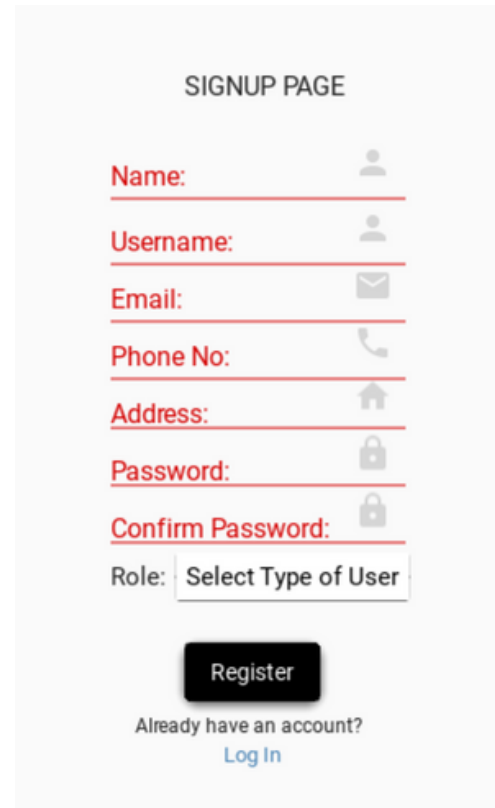**If you don't have an existing account:**
From the Login Page, press Register to proceed to The Signup page

This is the Signup Page that requires the user to fill in the required information in order to be registered

If you don't have an existing account:
Enter your credentials and select your role which are either: Customer, Seller, or Delivery Person.

If you don't have an existing account:
Press Register to Register your account. You can then proceed to the Log In page to enter your registered username and password

Seller Homepage

Clicking on Seller User Type will redirect the user to the seller homepage, where the seller's customers are displayed as well as the details of their orders. Clicking on the customer's name will direct the seller to a page where it display's the details of their customers' orders.
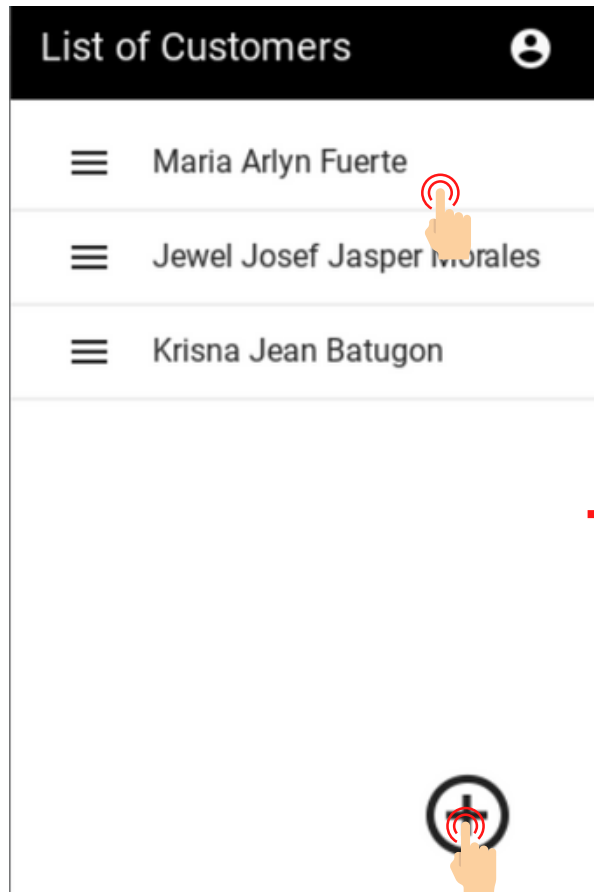
This is the Seller Homepage. It lists the names of the customers. Clicking on one of the listed items will show the details of each item. Clicking on "+" will open up a page where the seller will input the details of the customer and their order
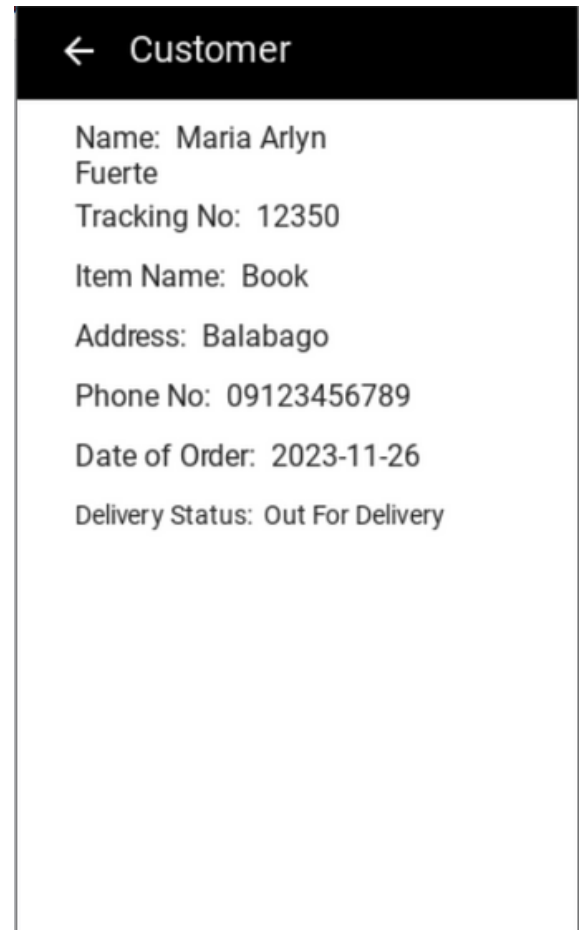
This will be displayed after clicking the name of the listed customer. It contains their details, and the tracking No. which will be used by the Customer to track their order.

Name of Customer

Customer Phone No.

Item Name

Customer Address

Pick-up Address

Date of Order

Category: | Category

Add

Name of Customer
Jean Formento

Customer Phone No.
09875623456

Item Name
Cups

Customer Address
Buhang

Pick-up Address
Cubay

Date of Order
4/15/2023

Category: | Non-Perishable

Add

This page will appear if user pressed on the "+" button. Here, the seller will input the necessary details of the customer

Click Add button to add the customer on the list displayed on the homepage, which will then generate the tracking number for the order.

List of Customers   👤

≡ Maria Arlyn Fuerte

≡ Jewel Josef Jasper Morales

≡ Krisna Jean Batugon

≡ Jean Formento

The new listed customer is now then displayed on the Homepage of the Seller.

⊕

Customer Homepage

Clicking on Customer User Type will redirect the user to the customer homepage, where the customer's orders are displayed. There's also an add button where the customer can input the tracking number to track their orders.
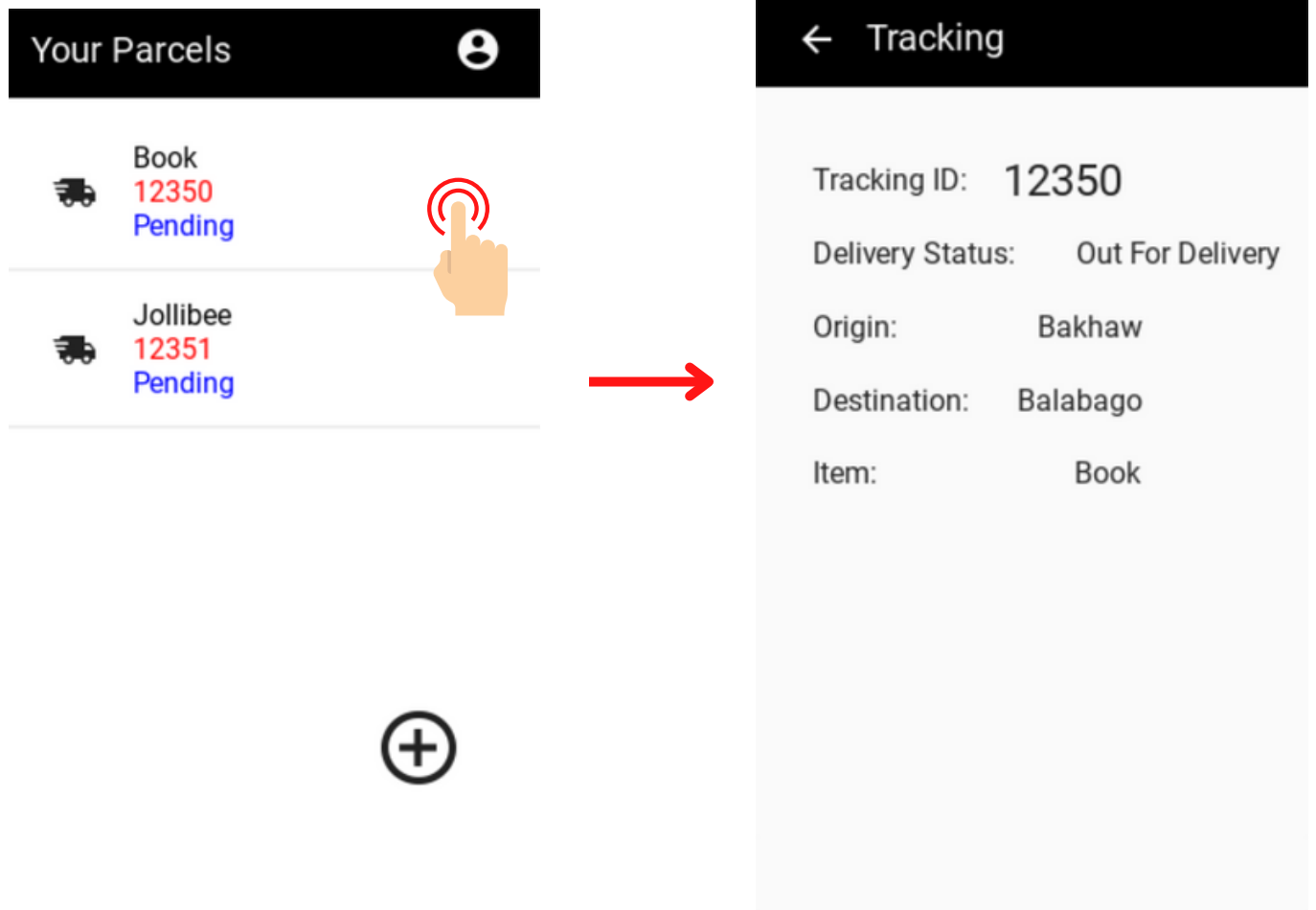
This is the Customer Homepage, it will contain the list of deliveries so that the customer can monitor it. Pressing on one of the displayed items will direct you to the Tracking Info the displays the Information for the delivery of your item.

This is the displayed information of the listed item which will display its Tracking ID, Delivery Status, Origin, Destination, Estimated Time of Arrival and the type of Item

Your Parcels 👤

🚚 Book
12350
Pending

🚚 Jollibee
12351
Pending

⊕

Press the "+" button to add a tracking No.
In order to Track your deliveries

Your Parcels 👤

🚚 Book
12350
Pending

🚚 Jollibee
12351
Pending

🚚 Vase
12352
Out For Delivery

⊕

A new item is added to the list of Orders
of the Customer's Homepage.

←

Tracking No:
|

Track

Enter Your Tracking No

←

Tracking No:
12352

Track

Input the Tracking No. Which will be
provided by the seller to the Customer.
Press Track Button to Add your deliveries
on the list of orders that are being
monitored

Delivery Person Homepage

Clicking on Delivery Person User Type will redirect the user to the Delivery person homepage, where the delivery person's deliverables are displayed as well as the origin and destination of these orders. Clicking on it will direct the user to a page that lists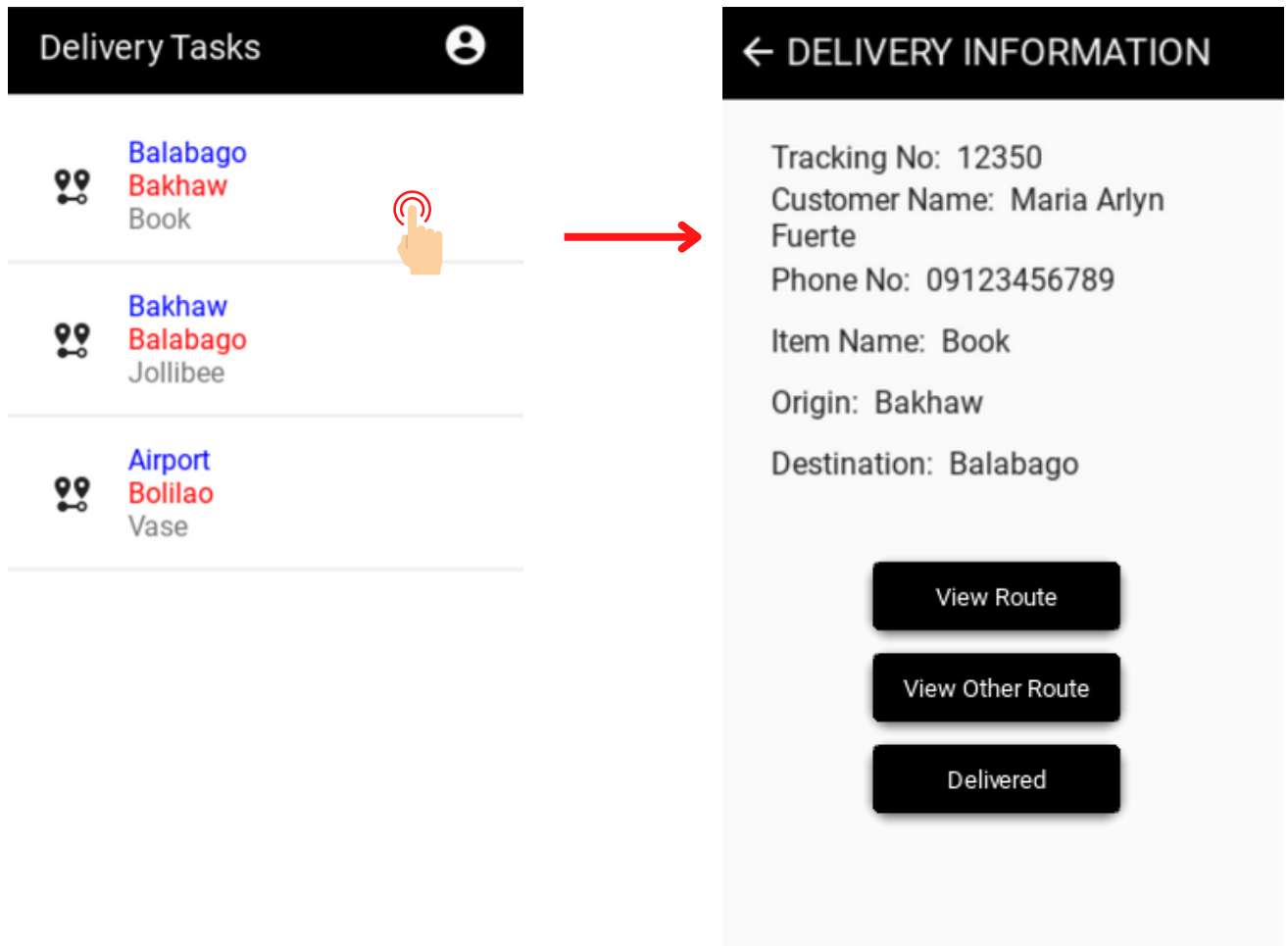 the details of the said order; and the main route from the Dijkstra Algorithm and the Alternative routes from the ACO algorithm


Delivery Person Homepage with tasks listed. If user presses one of the listed items, it will go to the Information Page.

Information about the delivery task displayed if a task is pressed. Which contains the routes for the task.

Main Route (Dijkstra Algorithm)

The Dijkstra simulation will show the shortest distance (green) and the shortest time (dark blue) to arrive at the destination (Red tag) from the origin (Blue tag). Clicking on the path will show its details.
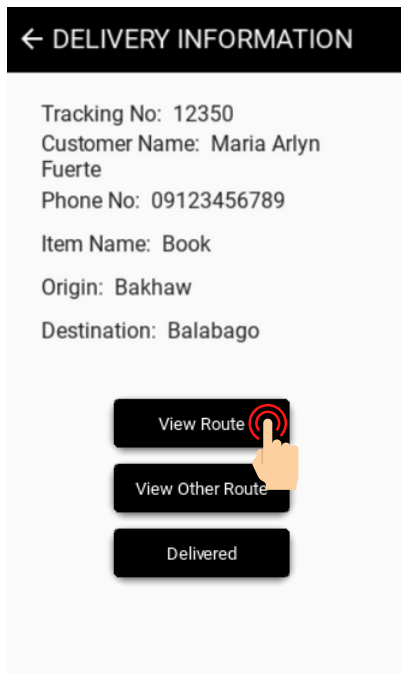
Press View Route to show the routes generated by Dijkstra Algorithm
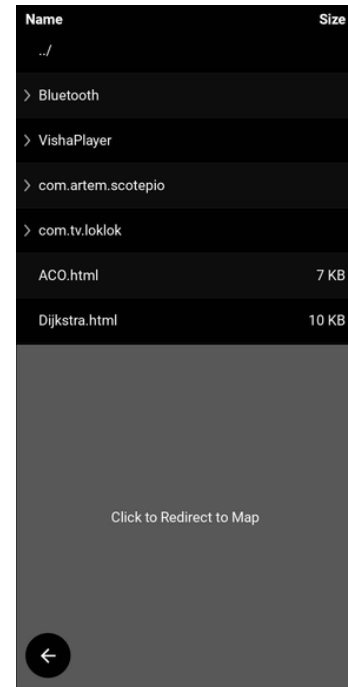
The File Browser is then displayed where you can only view html files.
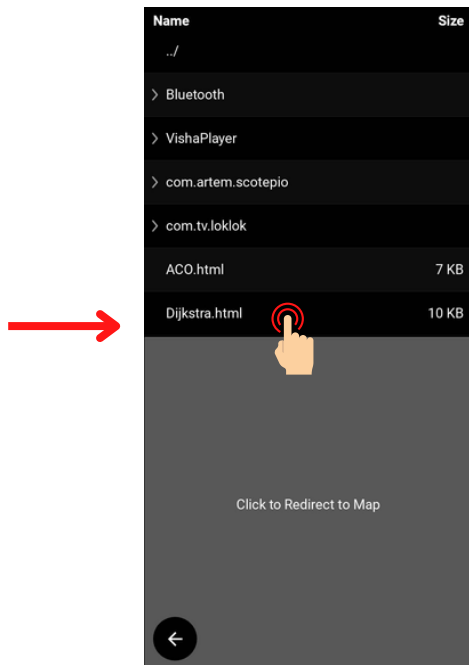
Press the "Dijkstra.html" to display the routes generated by Dijkstra Algorithm.

Press Click to Redirect to Map to redirect to the map

This is the displayed routes for the Dijkstra Algorithm

Route with Minimum Distance
Distance: 5.46meters
Time:7.39minutes

Route with Minimum Time
Distance: 5.52meters
Time:7.17minutes

Pressing on the colored lines (Green for Minimum Distance Route and Blue for Minimum Time Route) will show the Distance and Time for each route

Alternative Route (Ant Colony Optimization)

The ACO simulation will show the alternative route to arrive at the destination (Red tag) from the origin (Blue tag). Clicking on the path will show its details.

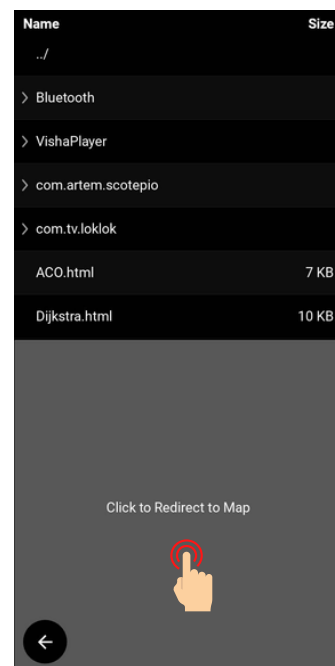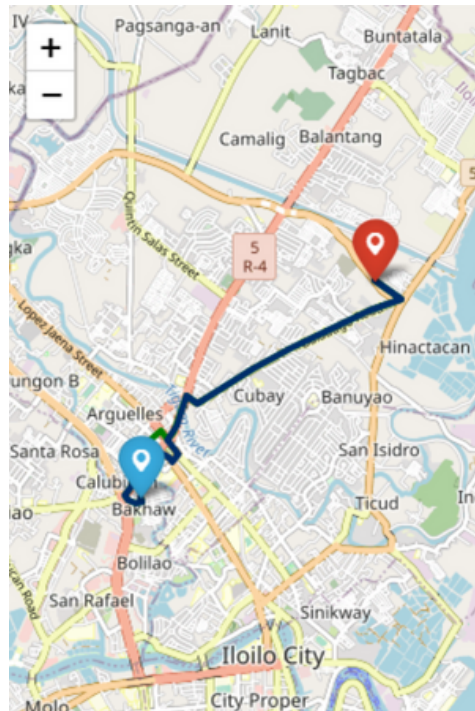Press on the "View Other Route" to view the route that was executed by the ACO algorithm.

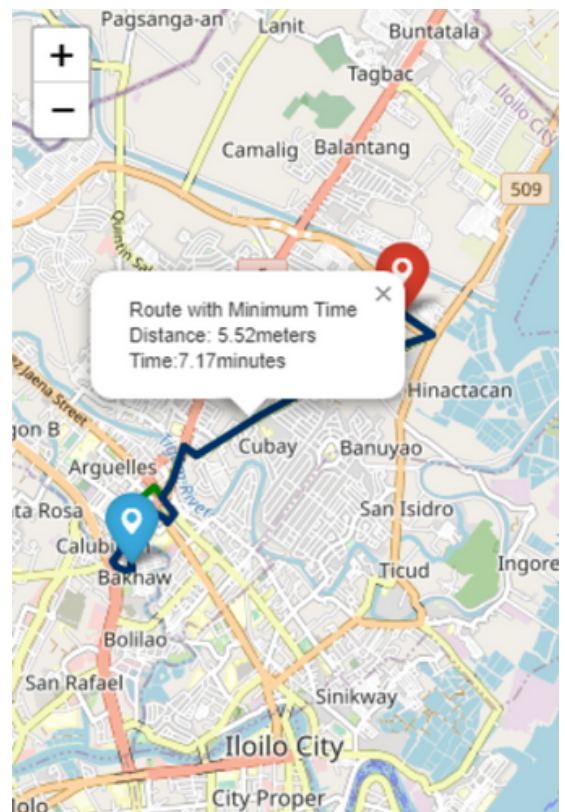The File Browser is then displayed where you can only view html files.
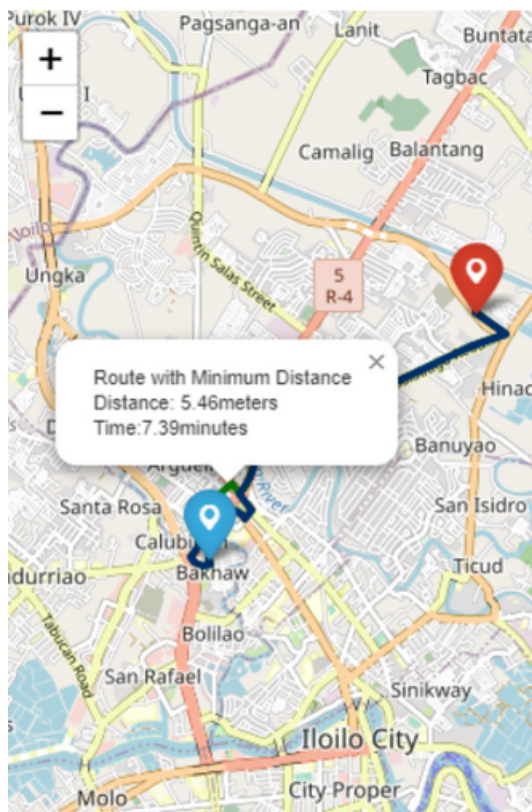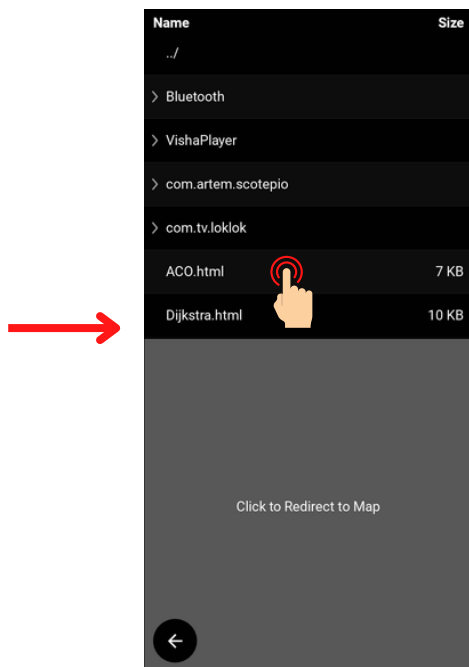
Press the "ACO.html" to display the routes generated by ACO Algorithm.
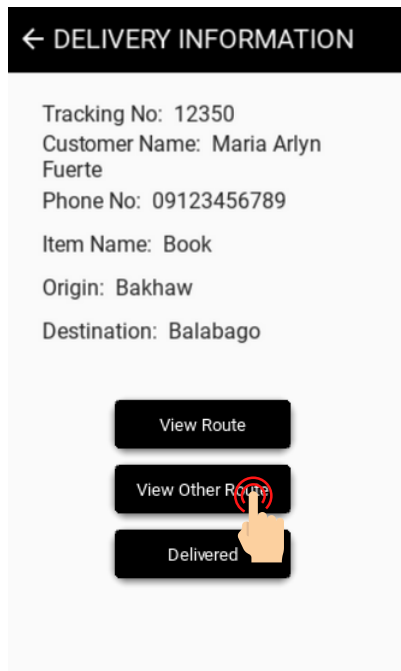
Press Click to Redirect to Map to redirect to the map
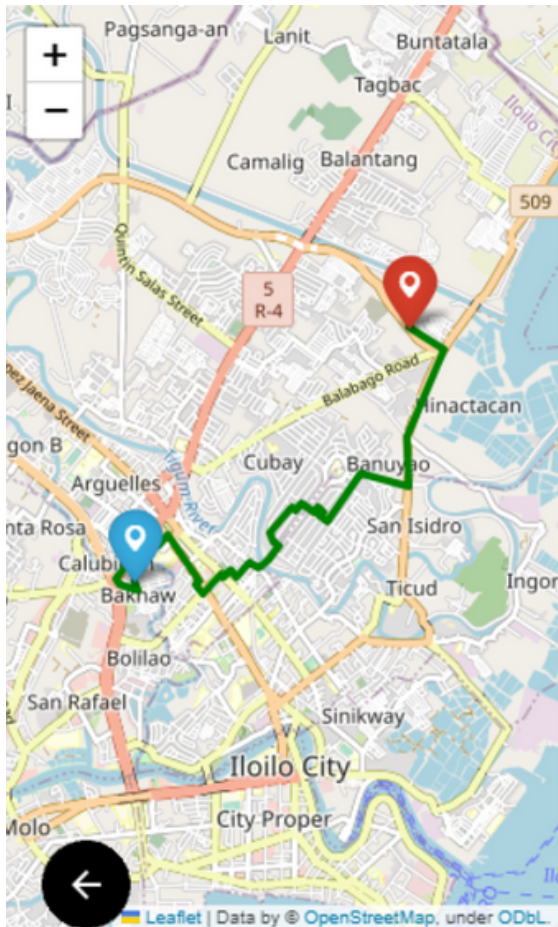
The ACO Route is then displayed on the map with its origin (blue tag) and Destination (red tag) with green path as the path for the alternative route.
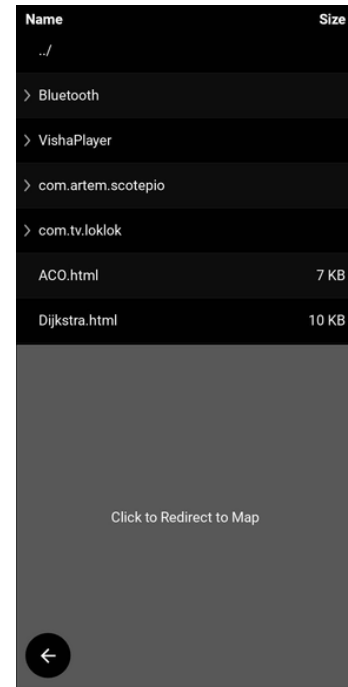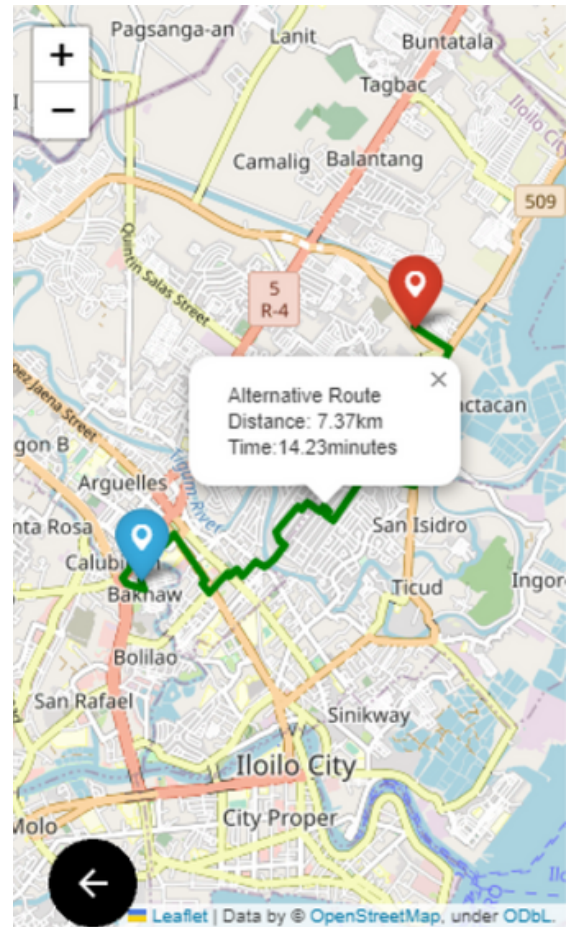
Pressing on the colored lines (Green for Minimum Distance Route and Blue for Minimum Time Route) will show the Distance and Time for each route

← DELIVERY INFORMATION

Tracking No: 12350
Customer Name: Maria Arlyn Fuerte
Phone No: 09123456789

Item Name: Book

Origin: Bakhaw

Destination: Balabago

View Route

View Other Route

Delivered

Press Delivered if the Delivery was successful and the parcel was delivered safely to the Customer.

Logging out

By logging out of the system, you gain the ability to switch between various roles available within the system. This action allows you to transition from one role to another, granting you the flexibility to perform different tasks and access different features based on the privileges associated with each role.
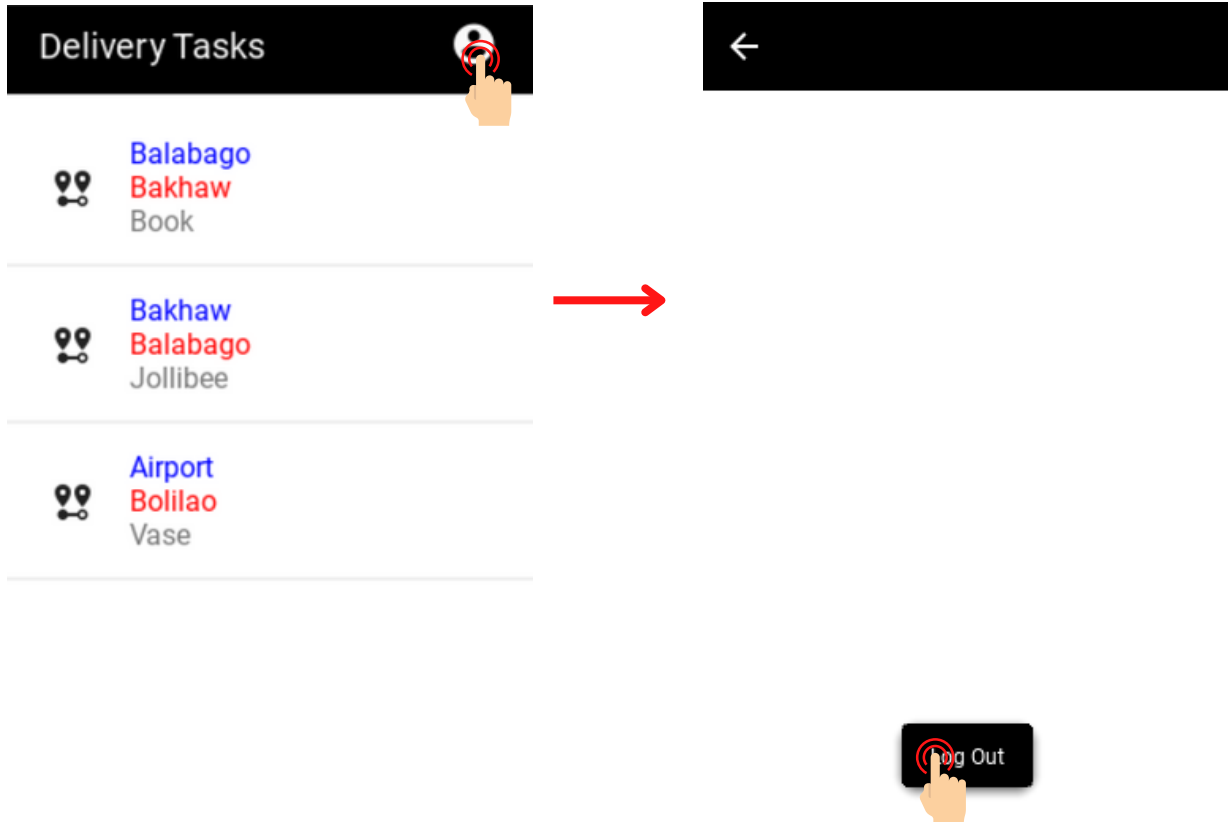
Press the account button located in the right upper corner of the application.

Press the Log Out button to log out of the application. This will redirect you back to the Log in Page.

Working with the Algorithms

To produce the HTML files required for the Delivery Person application, the initial step involves executing the algorithms. This necessitates the installation of python3 and the fulfillment of the requirements outlined in the "requirements.txt" file. Subsequently, the Dijkstra ("Dijkstra.py") and ACO ("ACO.py") algorithms should be executed.

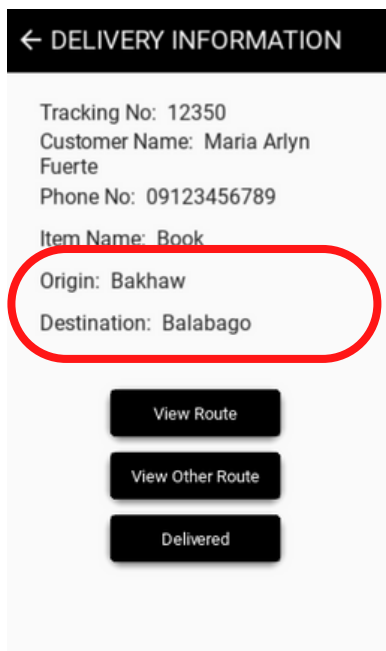To enhance accessibility and facilitate smoother execution of the algorithms, a Google Collab notebook has been created. This notebook offers a more efficient platform for running the code.

link for Google Colab notebook:
(https://colab.research.google.com/drive/1dSIbjAXhbsRaO5O8azrfq-hAqGfk0whj?usp=sharing)
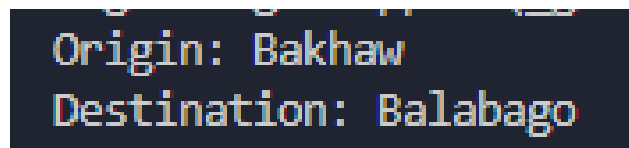
In order to ensure the proper functioning of the algorithm, it is necessary for you to manually input the origin and destination information that you have obtained from the Delivery Information page. By providing this essential input, you enable the algorithm to effectively process and calculate the desired results based on the specified origin and destination points. Therefore, your active involvement in entering the required information is crucial for the algorithm to accurately perform its intended tasks.

Once you have finished inputting the origin and destination values, the algorithm will initiate the process of determining the most efficient route using both Dijkstra and ACO algorithms. Once the computation is completed, the system will generate an HTML file as an output. It is necessary for you to download this file onto your Android device. By doing so, you will have access to the results and can review the optimized path for your journey.

Troubleshooting for fixing possible bugs

The File Browser exclusively shows folders, with no visible display of files.

1
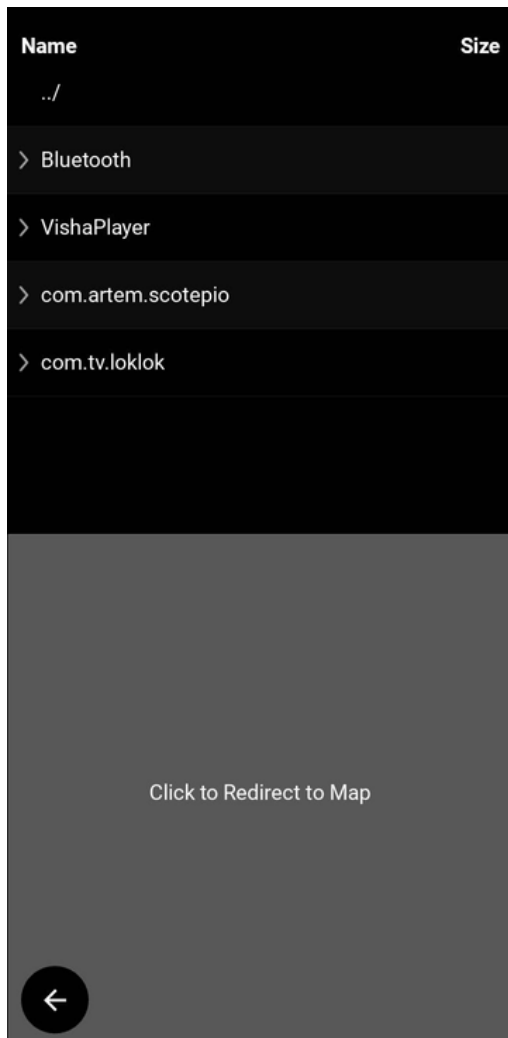
2
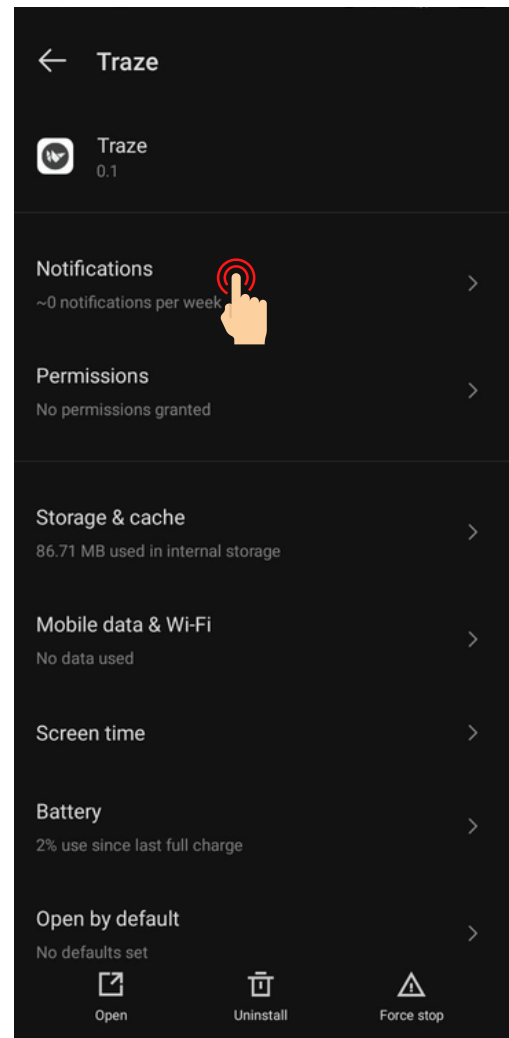
If HTML files are not visible in the file browser, it indicates that there is an issue with the permission settings on your phone, preventing their display.

Go to the app setting of Traze then click Permission. From there, you can access and manage the permissions granted to the app.

FThe File Browser exclusively shows folders, with no visible display of files. (continuation)

3
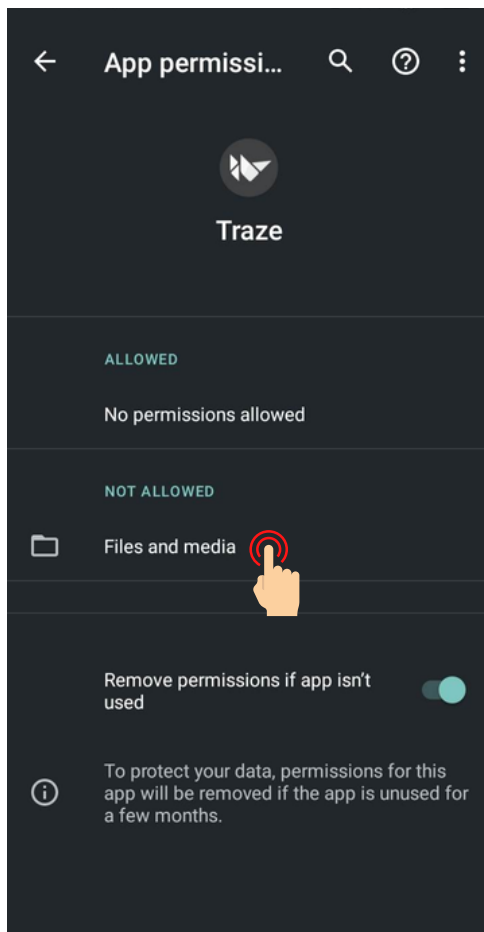
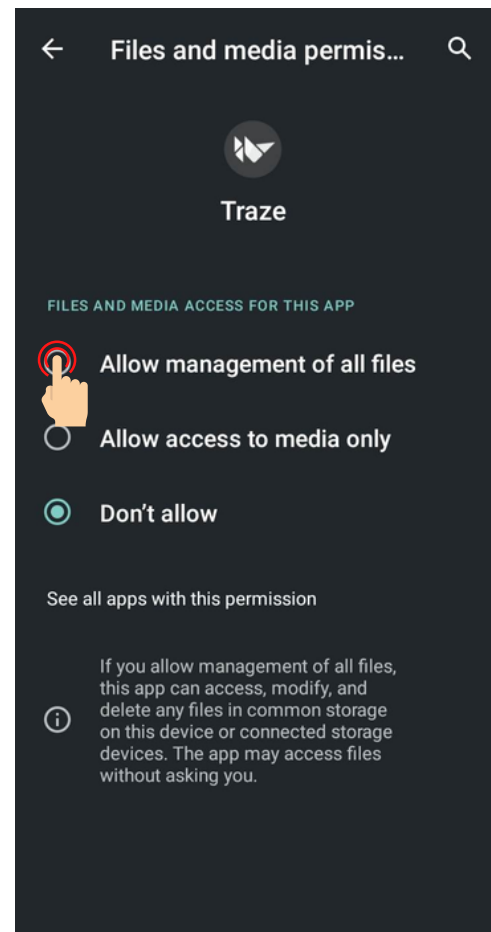Click Files and Media to give access the files on your phone.

4

Click allow management of all files to give full access of the files stored in your Android storage

Frequently Asked Questions (FAQs):

Q: How do I place an order through the delivery system?
A: You cannot place an order directly through the delivery system as it is designed for the seller to input customer details for delivery purposes.

Q: Can I track my order through the delivery system?
A: Yes, as a customer, you can track your order through the delivery system. The delivery system will generate the information for the customer to track their order.

Q: How does the Delivery System work?
A: the seller inputs the customer details for delivery, and the system generates a map for the delivery person and tracking information for the customer to track their order.

Q: What is the scope of the map generated by the delivery system?
A: The map generated by the delivery system is limited to Iloilo City, and it only shows the delivery route and delivery location within the city. The system is designed to track orders that are delivered within the city limits and does not provide mapping information outside of Iloilo City.

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