

Pick&GO
Online Pick Requesting and Delivery System
- REPORT -

Project Type: Build

Project Date: 20th February 2022

Contributor/s: [Tuan Saad](#), [Mathan Siva](#), [Sujeewan Sahadevan](#)

Abstract

The following project is a software development task based on developing an online pick requesting and delivering system for Pick&GO package delivery service. Automated online-based management systems are vastly advantageous for businesses and companies as they automate daily tasks, saving time and expenses. As technology keeps developing, automated management systems are becoming an essential section of businesses to handle daily activities. These systems allow employees to avoid manual procedures which would be a time waste, and instead maintain automated systems for daily business tasks.

This project's online pick requesting and delivering system could be designed using a web application. Users would be able to access the web application remotely through the internet. The development would majorly include Java, HTML, CSS, JavaScript, Ajax with PHP languages. MySQL could be used as the application database management system to store system, user and cooperation data. Visual studio code could be used as the development environment.

Table of Contents

Abstract.....	2
1.0 Overview.....	8
2.0 Requirements Specification	9
2.1 Purpose	10
2.2 Scope	11
2.3 Project Risks.....	11
2.4 Functional Requirements.....	12
2.5 Non-Functional Requirements.....	13
2.6 Security Mechanisms.....	14
2.7 User Story Maps	15
3.0 Software Design Document	18
3.1 Problem Definition	19
3.2 Intended Solution.....	19
3.3 Tools and Technologies.....	20
3.4 Design Specification.....	23
3.5 System Architecture	26
3.6 Software Development Methodologies	27
3.7 Workplan	29
4.0 Implementation	30
4.1 Functionalities	31
4.2 Development Tools Utilization.....	41
4.3 Collaboration Tools Utilization	43
5.0 Software Testing Design.....	46
5.1 Acceptance Testing.....	47
Conclusion	93
References.....	94

List of Figures

Figure 1: User story map - administrator	15
Figure 2: User story map - service centre staff	16
Figure 3: User story map - customer.....	17
Figure 4: Web application architecture	21
Figure 5: Use Case Diagram	23
Figure 6: Data Flow Diagram	24
Figure 7: Class Diagram	25
Figure 8: System architecture diagram	26
Figure 9: Project Workplan.....	29
Figure 10: Implementation - folder structure.....	30
Figure 11: Function - user login.....	31
Figure 12: Function - add new service centre	31
Figure 13: Function - view and manage service centre records.....	32
Figure 14: Function - update operational service centre record.....	32
Figure 15: Function - add new operational service staff member.....	33
Figure 16: Function - view or manage current service centre staff member records.....	33
Figure 17: Function - update service centre staff member record.....	34
Figure 18: Function - add new pickup item	34
Figure 19: Function - view or manage current item pickup and delivery records	35
Figure 20: Function - update item pickup or delivery record	35
Figure 21: Function - view specific item pickup record	36
Figure 22: Function - update specific item pickup record's delivery status	36
Figure 23: Function – create new customer account.....	37
Figure 24: Function - track specific item pickup record's delivery status	37
Figure 25: Function - user login - mobile view	38
Figure 26: Function - forms - mobile view	39
Figure 27: Function - track item delivery - mobile view	40
Figure 28: Visual studio code utilization	41
Figure 29: XAMPP server utilization	42
Figure 30: GitHub utilization 1	43
Figure 31: GitHub utilization 2	44
Figure 32: GitHub utilization 3	44
Figure 33: Trello utilization 1	45
Figure 34: Trello utilization 2	45
Figure 35: Acceptance test case 01 - evidence 01.....	50
Figure 36: Acceptance test case 01 - evidence 02.....	50
Figure 37: Acceptance test case 01 - evidence 03.....	51
Figure 38: Acceptance test case 01 - evidence 04.....	51
Figure 39: Acceptance test case 01 - evidence 05.....	52
Figure 40: Acceptance test case 02 - evidence 01.....	54
Figure 41: Acceptance test case 02 - evidence 02.....	54

Figure 42: Acceptance test case 02 - evidence 03.....	55
Figure 43: Acceptance test case 03 - evidence 01.....	57
Figure 44: Acceptance test case 03 - evidence 02.....	57
Figure 45: Acceptance test case 03 - evidence 03.....	58
Figure 46: Acceptance test case 04 - evidence 01.....	60
Figure 47: Acceptance test case 04 - evidence 02.....	60
Figure 48: Acceptance test case 04 - evidence 03.....	61
Figure 49: Acceptance test case 05 - evidence 01.....	63
Figure 50: Acceptance test case 05 - evidence 02.....	64
Figure 51: Acceptance test case 05 - evidence 03.....	64
Figure 52: Acceptance test case 05 - evidence 04.....	65
Figure 53: Acceptance test case 05 - evidence 05.....	65
Figure 54: Acceptance test case 05 - evidence 06.....	66
Figure 55: Acceptance test case 05 - evidence 07.....	66
Figure 56: Acceptance test case 05 - evidence 08.....	67
Figure 57: Acceptance test case 05 - evidence 09.....	67
Figure 58: Acceptance test case 05 - evidence 10.....	68
Figure 59: Acceptance test case 06 - evidence 01.....	70
Figure 60: Acceptance test case 06 - evidence 02.....	70
Figure 61: Acceptance test case 06 - evidence 03.....	71
Figure 62: Acceptance test case 07 - evidence 01.....	73
Figure 63: Acceptance test case 07 - evidence 02.....	74
Figure 64: Acceptance test case 07 - evidence 03.....	74
Figure 65: Acceptance test case 07 - evidence 04.....	75
Figure 66: Acceptance test case 07 - evidence 05.....	75
Figure 67: Acceptance test case 07 - evidence 06.....	76
Figure 68: Acceptance test case 07 - evidence 07.....	76
Figure 69: Acceptance test case 08 - evidence 01.....	78
Figure 70: Acceptance test case 08 - evidence 02.....	78
Figure 71: Acceptance test case 08 - evidence 03.....	79
Figure 72: Acceptance test case 09 - evidence 01.....	82
Figure 73: Acceptance test case 09 - evidence 02.....	82
Figure 74: Acceptance test case 09 - evidence 03.....	83
Figure 75: Acceptance test case 09 - evidence 04.....	83
Figure 76: Acceptance test case 09 - evidence 05.....	84
Figure 77: Acceptance test case 09 - evidence 06.....	84
Figure 78: Acceptance test case 09 - evidence 07.....	85
Figure 79: Acceptance test case 09 - evidence 08.....	85
Figure 80: Acceptance test case 09 - evidence 09.....	86
Figure 81: Acceptance test case 09 - evidence 10.....	86
Figure 82: Acceptance test case 09 - evidence 11.....	87
Figure 83: Acceptance test case 09 - evidence 12.....	87
Figure 84: Acceptance test case 09 - evidence 13.....	88
Figure 85: Acceptance test case 09 - evidence 14.....	88

Figure 86: Acceptance test case 09 - evidence 15.....	89
Figure 87: Acceptance test case 10 - evidence 01.....	90
Figure 88: Acceptance test case 10 - evidence 02.....	91
Figure 89: Acceptance test case 10 - evidence 03.....	91

List of Tables

Table 1: Security Mechanism - User role-based functionalities	14
Table 2: Development Tools and Technologies	20
Table 3: Technical requirements	20
Table 5: Acceptance testing - test case template	47
Table 6: Acceptance testing - targets	48
Table 7: Acceptance test case 01	49
Table 8: Acceptance test case 02	53
Table 9: Acceptance test case 03	56
Table 10: Acceptance test case 04	59
Table 11: Acceptance test case 05	62
Table 12: Acceptance test case 06	69
Table 13: Acceptance test case 07	72
Table 14: Acceptance test case 08	77
Table 15: Acceptance test case 09	80
Table 16: Acceptance test case 10	90
Table 17: Acceptance testing report.....	92

1.0 Overview

Pick&GO is a package delivery service provider established in Sri Lanka where they provide goods delivery island wide. They have several operational service centres at all districts and number of staff employed vary according to the general capacity of business operations. Pick&GO wishes to introduce an online pick requesting and delivering system for the requirement of goods delivery. Customers are to be given facilities to request a pickup of an item and track the delivery to the destination. The pickup schedule starts with a request initiated through the system or a phone call query to the nearest centre from the customer. In the online system, the nearest operational centre will be selected based on the customer location. The pickup request is to be given a scheduled pickup time within one-hour duration from the request.

Pick&GO requires the pickup time to not exceed 12 hours from the request time which is a norm of the company. Once the picked items collected to each operational centre, those are distributed to nearest operational centre of the destination through regular delivery vehicles, which are happening during the night. The vehicle routes and coverage of centres by each vehicle is available for each centre. These vehicles take packages of own centre and the intermediate centres within the route. Each operational centre has to notify the packages to be loaded into each vehicle by 7PM. Some packages are delivered transits of intermediate operational centres based on the vehicle route coverages. Once the packages are received by the operational centres, those will be delivered to the receiver, within 12 hours after receiving it.

Pick&GO requires each customer and the receiver can track the package status and location through the web and mobile apps. The users to be able to indicate their availability for the pickup of the items and all the contact details are to be provided including the receiver. Both the sender and receiver will be issued with a tracking code once the item collection confirmed. The details of the items to be delivered with their weights and type of items which important for the quality of service required are entered during the pickup. The charges are applied based on the weight, size, and distance parameters where a tariff schedule is a common schedule for each centre. Once the item is delivered, task completion will be signed by the receiver and uploaded into the system with a receiver's photograph.

2.0 Requirements Specification



PICK REQUESTING AND DELIVERY SYSTEM - COMPLETE REPORT

Pick&GO - Online Pick Requesting and Delivery System



2.1 Purpose

Pick&GO is a package delivery service which provides island wide goods delivery services. Pick&GO currently requires an online pick requesting and delivering system for the requirement of goods delivery. Their customers should be facilitated to request a pickup of an item and track the delivery to the destination.

The purpose of the current project is to develop an online pick requesting and delivering system for Pick&GO to enhance their service providing experience with customers.

Key Requirements:

1. Provide user roles for Pick&GO administrator, service member staff and customers.
2. User login for administrator, service member staff and customers, assigning login credentials.
3. Create and manage operational centre branches, based on centre location.
4. Add and manage operational centre staff members, based on centre branches.
5. Create and manage item pickup records, based on item dimensions and costs.
6. Create and manage item delivery records, based on item pickup status.
7. Allow customers to create system account and request item pickups.
8. Provide a unique tracking number for item pickup records, based on item information.
9. Allow administrators and staff members to update delivery tracking status.
10. Initiate item tracking system for item deliveries, based on unique tracking number.

Intended Audience Users:

- Pick&GO Administrator
- Pick&GO Operational Centre Staff
- Pick&GO Customer

2.2 Scope

Key Procedures:

- User login based in user permissions for admin, centre staff and customer.
- Create and manage operational centre branches based on centre location.
- Create and manage operational centre staff members based on centre branch.
- Create and manage pickup item records based on item dimensions and cost.
- Search and track item deliveries using unique pickup tracking number.

Using an online pick requesting and delivering system, the potential advantages include;

- Real-time visibility of operational activities.
- Increased accessibility.
- Access to customer data to optimize business and operational procedures.
- Enhanced customer experience.
- Optimization of logistical operations and time-management.
- Eliminate duplication of orders.
- Maintain a systematic record of inventory.
- Eliminating the duplication of orders.

2.3 Project Risks

Below mentioned are certain risks to be considered while working on the current project;

- There's a chance that the system will fail or malfunction.
- The risk of damage due to weather, pests & other factors.
- Employees' technical capabilities being insufficient to handle the system.
- Internet & connectivity issue depending on the geographical locations of the centres.

2.4 Functional Requirements

01. User Roles and Permissions.

- Pick&GO administrator.
- Operational centre staff.

02. Operational Service Centre.

- Add new operational service centre branch record.
- View existing operational service centre branch records.
- Edit existing operational service centre branch record.
- Delete existing operational service branch centre record.

03. Operational Service Centre Staff.

- Add new operational service centre staff member record.
- View existing operational service centre staff records.
- Edit existing operational service centre staff record.
- Delete existing operational service centre staff record.

04. Item Pickup.

- Add new item pickup record.
- View existing item pickup records.
- Edit existing item pickup records.
- Delete existing item pickup record.

05. Item Delivery.

- View pickup item delivery status records.
- Update pickup item delivery record.
- Delete pickup item delivery record.

06. Item Delivery Tracking.

- View delivery item tracking status records.
- Update delivery item tracking status record.

2.5 Non-Functional Requirements

01. System Hardware Requirements:

- Intel (Pentium 4 or newer), MacOS (OS X El Capitan 10.11 or newer) or Linux (64-bit Ubuntu 18.04+ or newer).
- 4GB RAM minimum
- 250GB hard disk storage minimum.
- Internet connection.

02. System Software Requirements:

- Windows 7 operating system or later.
- Google Chrome internet browser.

03. Application Security:

The entire pick requesting and delivering system should be secured with a strong user login page. This way system users would only be able to access the functionalities using a unique password assigned to them. User role-based functions are also provided for the users to protect the system from vulnerabilities.

04. Data Safety:

All essential data related with the online pick requesting and delivering system is stored in the system database, which is based on MySQL. Pick&GO could store backups of the system database to store backups in case of a system data loss. This ensures that the customer and centre related data would be protected.

05. User Experience:

An efficient user experience for the application users is an essential requirement in application development. The current application also contains high user experience standards including straightforward functions, faster functional loading times and clean user interfaces.

2.6 Security Mechanisms

As a primary security mechanism, the entire online pick requesting and delivering system is secured with a user login page, where all system users are required to enter a unique password assigned to them. The users would not be able to access any functionalities of the system without logging in with an account. This mechanism ensures that only allowed parties are able to access the system data.

Moreover, the functionalities of the online pick requesting and delivering system would be categorised and utilized by the system users based on their application user role and permission. This concept has been considered for the application develop considering the security to system data. Only the system administrators should have access for Pick&GO crucial functionalities, in order to avoid vulnerabilities for the application. The user role-based functionalities for the application are mentioned below;

Table 1: Security Mechanism - User role-based functionalities

User	Allowed System Functionalities
Administrator	<ul style="list-style-type: none">• Add/View/Edit/Delete operational service centre branch records.• Add/View/Edit/Delete operational service centre staff records.• Add/View/Edit/Delete customer item pickup records.• Add/View/Edit/Delete customer item delivery and status records.• Add/View/Edit/Delete delivery item tracking records.
Centre Staff	<ul style="list-style-type: none">• Add/View/Edit/Delete customer item pickup records.• Add/View/Edit/Delete specific customer item delivery and status records.• Add/View/Edit/Delete specific delivery item tracking records.
Customer	<ul style="list-style-type: none">• Create/Edit customer user account.• Add/View/Edit/Delete item pickup requests.• View delivery item tracking status.

2.7 User Story Maps

User stories illustrate how the end users of intended online pick requesting and delivery system would interact with its functionalities. This depicts on how useful the system would be for the end users.

The intended application user story map for Pick&GO administrator is shown below.

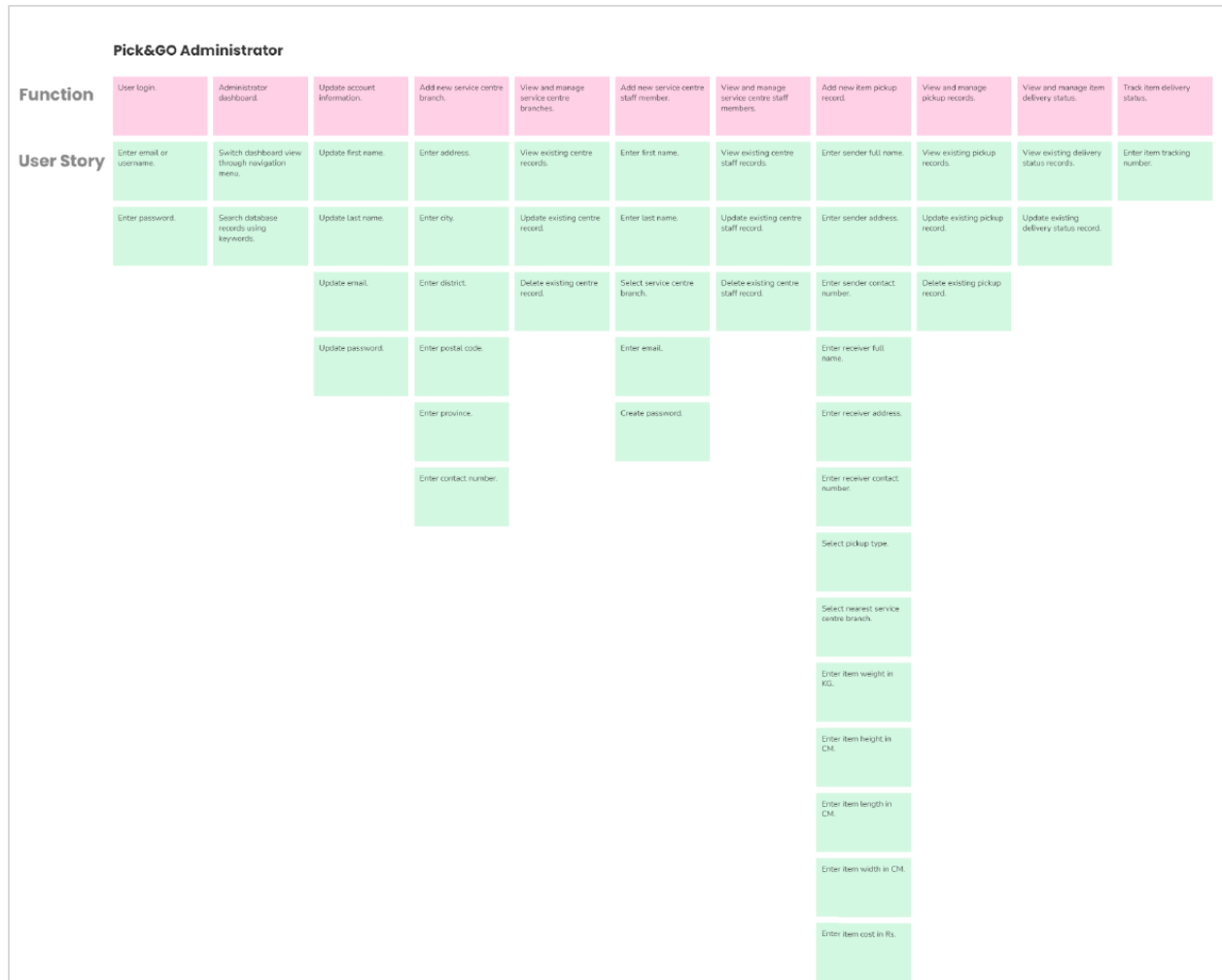


Figure 1: User story map - administrator

The intended application user story map for Pick&GO service centre staff is shown below.

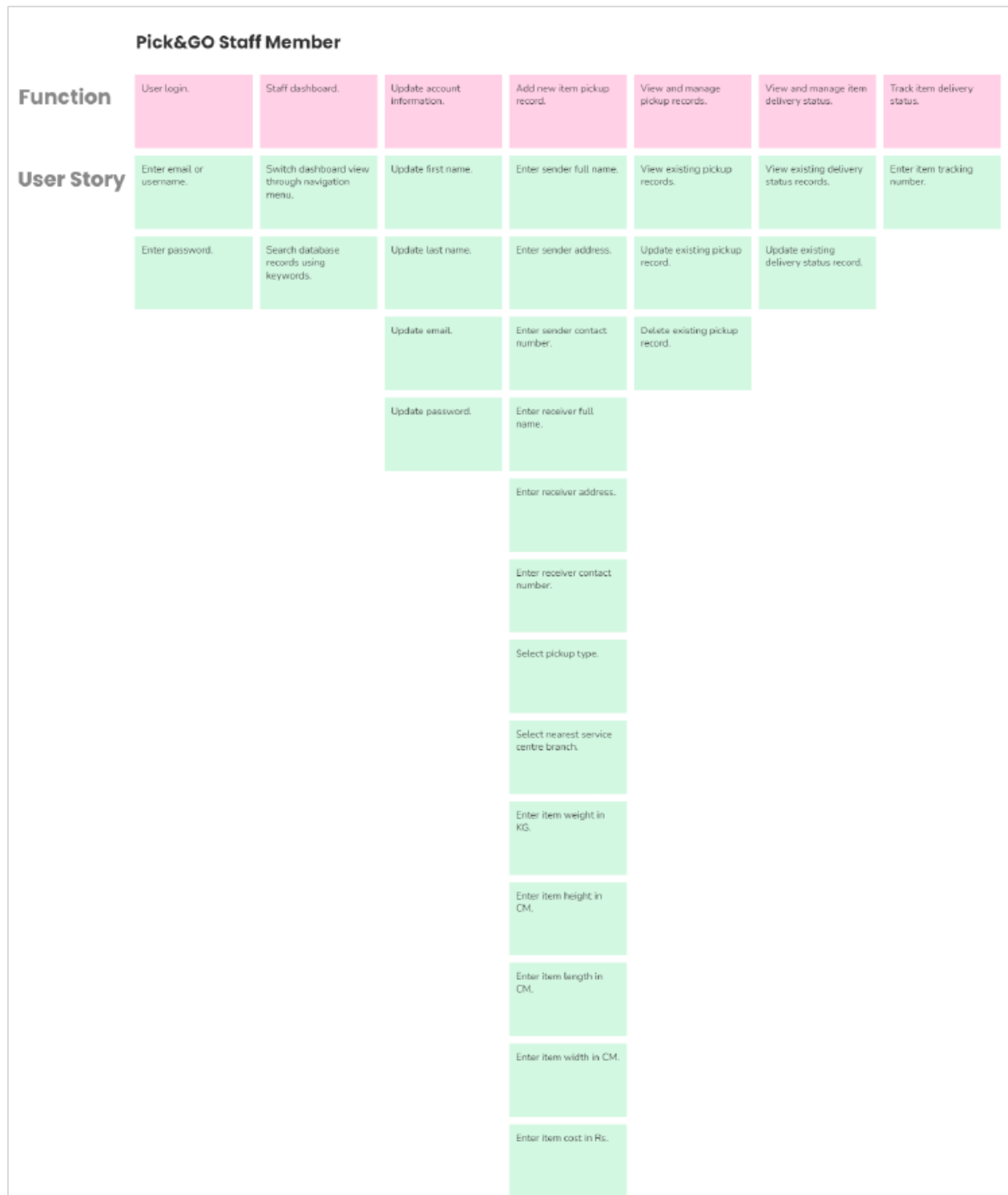


Figure 2: User story map - service centre staff

The intended application user story map for Pick&GO customers is shown below.

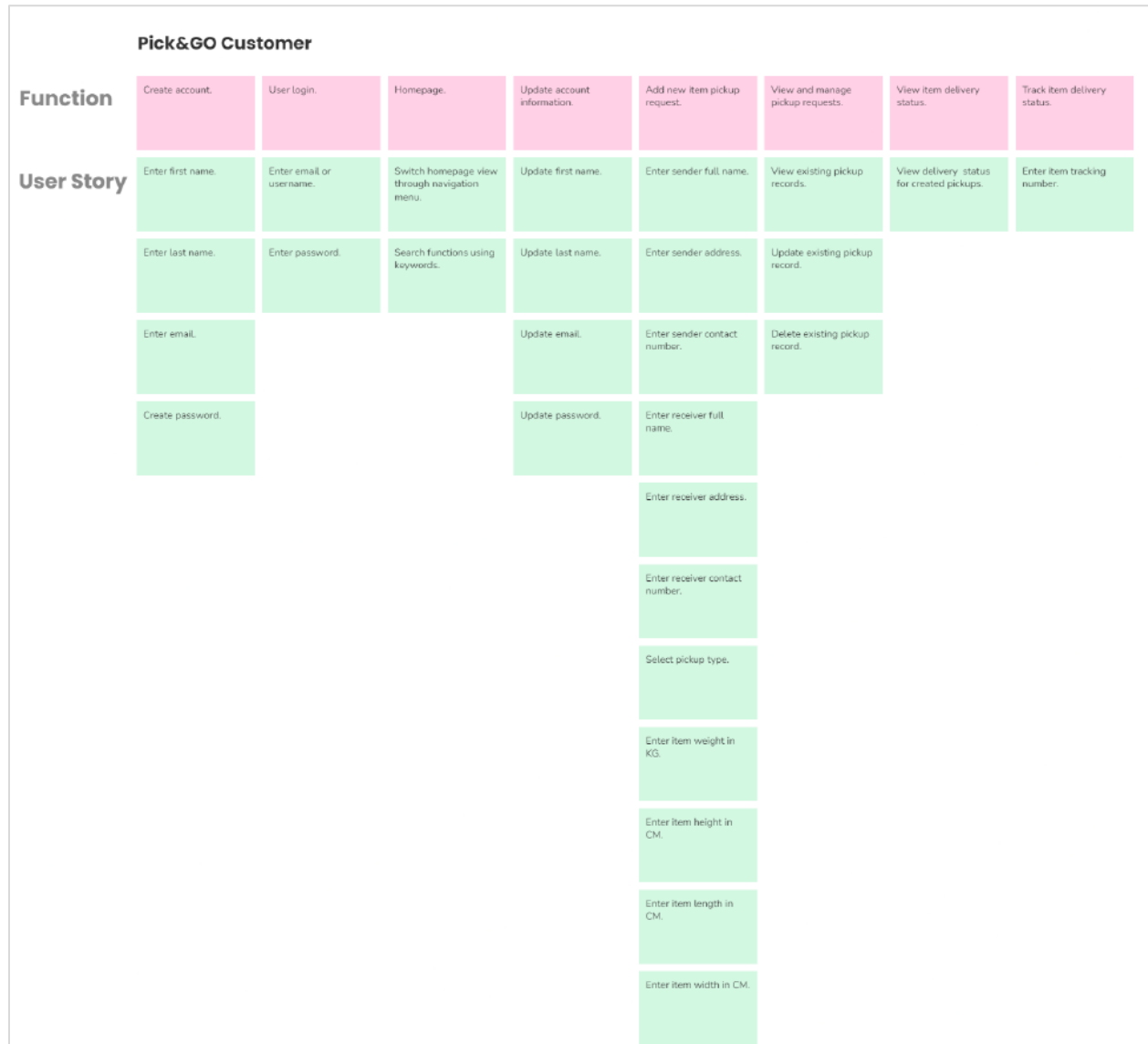


Figure 3: User story map - customer

3.0 Software Design Document

Pick&GO

Online Pick Requesting and Delivery System

- SOFTWARE DESIGN DOCUMENT -

3.1 Problem Definition

Pick&GO is a package delivery service which provides island wide goods delivery services. Pick&GO currently requires an online pick requesting and delivering system for the requirement of goods delivery. Their customers should be facilitated to request a pickup of an item and track the delivery to the destination. The purpose of the current project is to develop an online pick requesting and delivering system for Pick&GO to enhance their service providing experience with customers. The system requires Pick&GO to handle their operational service centre branch information based on their branches and location. Moreover, service centre branches should also contain centre staff members information. Pick&GO requires their staff members to add and manage item pickup records. Customers are required to be able to initiate pickup requests and track their deliveries using a tracking number system.

3.2 Intended Solution

The intended solution is to develop an Online Pick Requesting and Delivering system, with the essential requirements necessary to carry out daily operations for Pick&GO package delivery service. The developed software would be a web application, which users can access remotely through the internet.

This project's online pick requesting and delivering system could be designed using a web application. Users would be able to access the web application remotely through the internet. The development would majorly include Java, HTML, CSS, Bootstrap, JavaScript, Ajax and PHP languages. MySQL could be used as the application relational database management system to store Pick&GO centre and customer related data. Visual studio code could be used as the development environment.

The planned functionalities of the application are mentioned below.

- User login based in user permissions for admin, centre staff and customer.
- Create and manage operational centre branches based on centre location.
- Create and manage operational centre staff members based on centre branch.
- Create and manage pickup item records based on item dimensions and cost.
- Search and track item deliveries using unique pickup tracking number.

3.3 Tools and Technologies

The development of Pick&GO online pick requesting and delivering system would be based on web application technologies. System users would be able to access the system through the internet. Development tools and technologies required to develop and execute the application are shown below.

Table 2: Development Tools and Technologies

Software Platform	Web Application
Mobile Application Platform	Web-Based Mobile Application
Front-End Programming Language	HTML, CSS, Bootstrap, JavaScript and Ajax
Back-End Programming Language	PHP, JavaScript and Ajax
Database	MySQL
Local Web Server	XAMPP
Development Environment	Visual Studio Code

The technical requirements to properly configure the application are mentioned below.

Table 3: Technical requirements

Hardware Requirements	<ul style="list-style-type: none">• Pentium 4 or newer processor.• Minimum 4GB of RAM.• Minimum 250GB of HDD storage.• Stable internet router connection.
Software Requirements	<ul style="list-style-type: none">• Running Windows (7 or newer) or macOS (OS X El Capitan 10.11 or newer) system operating system.• Internet browser, Google Chrome recommended.
System Configuration	<ul style="list-style-type: none">• Web application domain name.• Web server with database system for application hosting.

Web Application:

Web applications are programs that utilize the internet in order to send and retrieve system data. These applications are designed to run on web browser software, where all functions are transferred. The program is directly connected to the internet through a web server, which contains the application's source code and allows it to run. Web applications are widely popular among software development projects due to their simple user accessibility and efficient development approaches. Web application are included with client-side and server-sided technologies. The client of a web application would be the end user accessing the application while the server-side hosts the application [1]. Web application platform development has been chosen for the current project as Pick&GO requires an online system to be accessed through the internet.

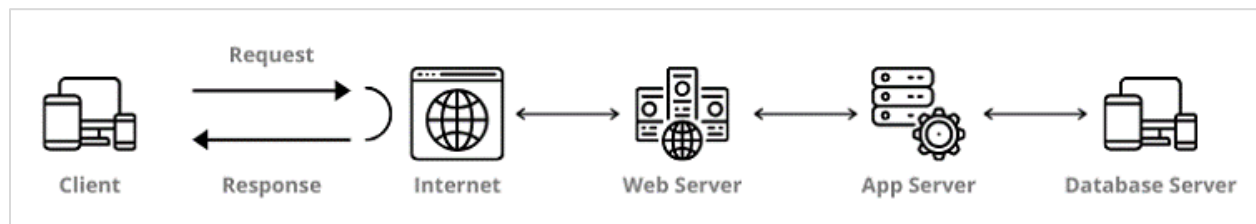


Figure 4: Web application architecture

HTML (HyperText-Markup Language):

HTML is a text-oriented language which is used to code the front-end interfaces of web applications. HTML is used to implement the visual structures of an application, based on what the end-user is required to see, based on the requirements. HTML basically instructs web browsers on how visual contents should be structured and viewed for the end user [2]. HTML has been chosen for the current project's online pick requesting and delivering application, as it is an efficient pick to implement the front-end development.

CSS (Cascading Style Sheets):

CSS is a simple concept of "style sheets" implemented along with HTML language, for front-end based implementation of an application. CSS assists to create efficient visual contents of an application. For example, visual contents such as web content colours, alignments or text decorations could be described using CSS in integration with HTML language. CSS has been selected along with HTML for the current project as it would be an easier task to design the visual interfaces of the web application.

JavaScript (JS):

JavaScript is a straightforward dynamic programming language which initiates logical concepts for the structures and contents of a web application. JavaScript assists the application to insert dynamic web components that could interact in real-time. Visual interface component functionalities would be greatly reduced without the implementation of JavaScript. [3] JavaScript has been selected for the current project to develop dynamic features, that wouldn't be possible with just HTML and CSS. The intended application would not be visually efficient without the implementation of dynamic web components using JavaScript.

MySQL:

MySQL is a free and open-source database management system, which is based on relational database management technologies. MySQL has been selected as the current projects database system, considering that the Pick&GO application requires essential data to be integrated within the system and a database management system, following a connection required within the system and application data.

Visual Studio Code:

Visual studio code, also known as vs code is an open-source and free application source-code editing software development environment developed by Microsoft. The editor is included with essential application development features along with an efficient interface, ideal for any sort of application development. Visual studio code has been selected as the development environment for the current project due to its advanced development features with straightforward system structural concepts.

Web-Based Mobile Application:

Web-based mobile application uses a simple concept of just requiring an installed web browser on any mobile device. The suplication would still work as same as the online web application. Considering that Pick&GO requires a mobile-supported application, web-based mobile application methodology has been selected to provide the same functionalities as the web application. Moreover, the web-based mobile application would be able to run on any mobile operating system including Android, iOS or Windows.

3.4 Design Specification

Use Case Diagram:

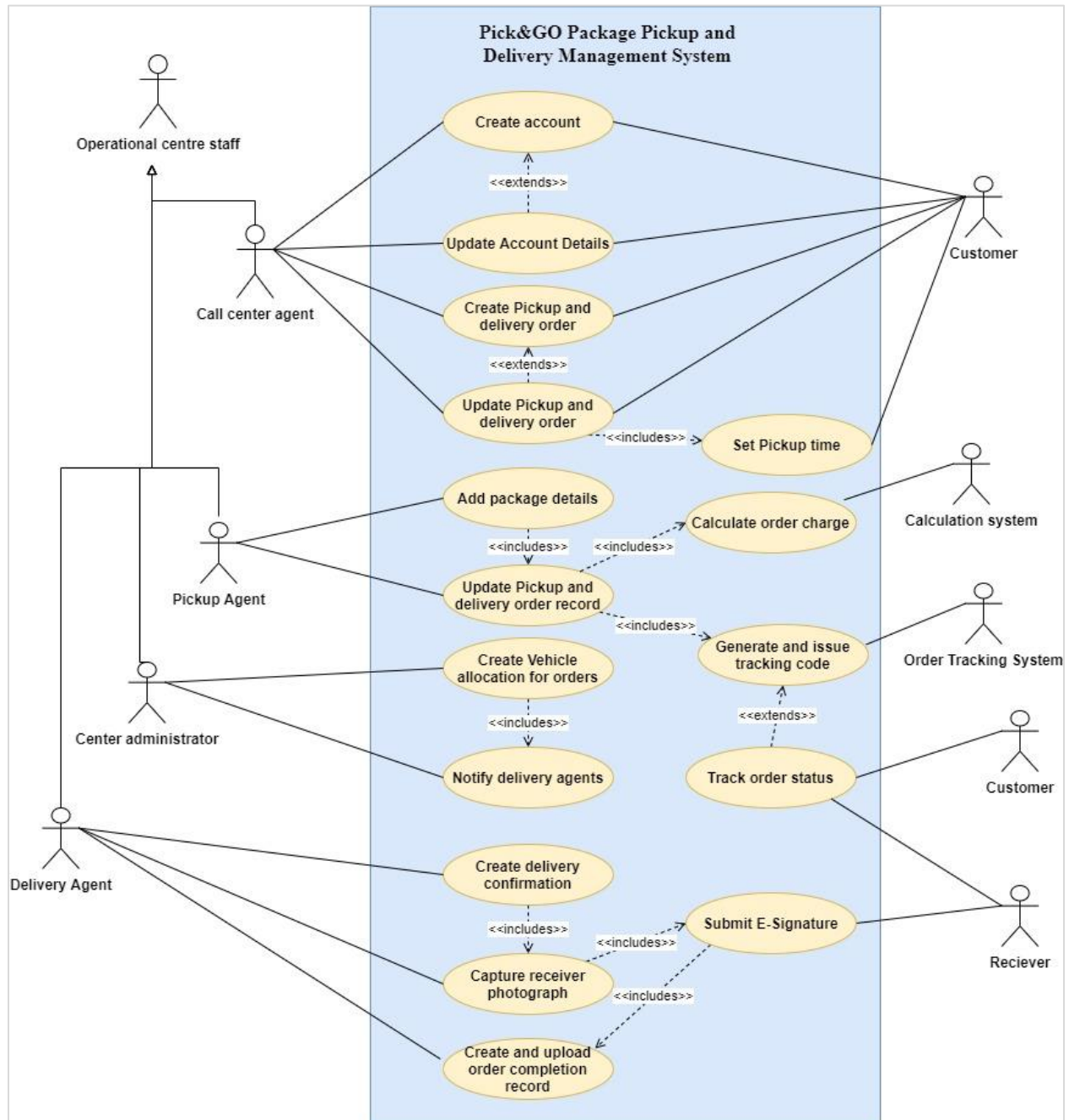


Figure 5: Use Case Diagram

Data Flow Diagram:

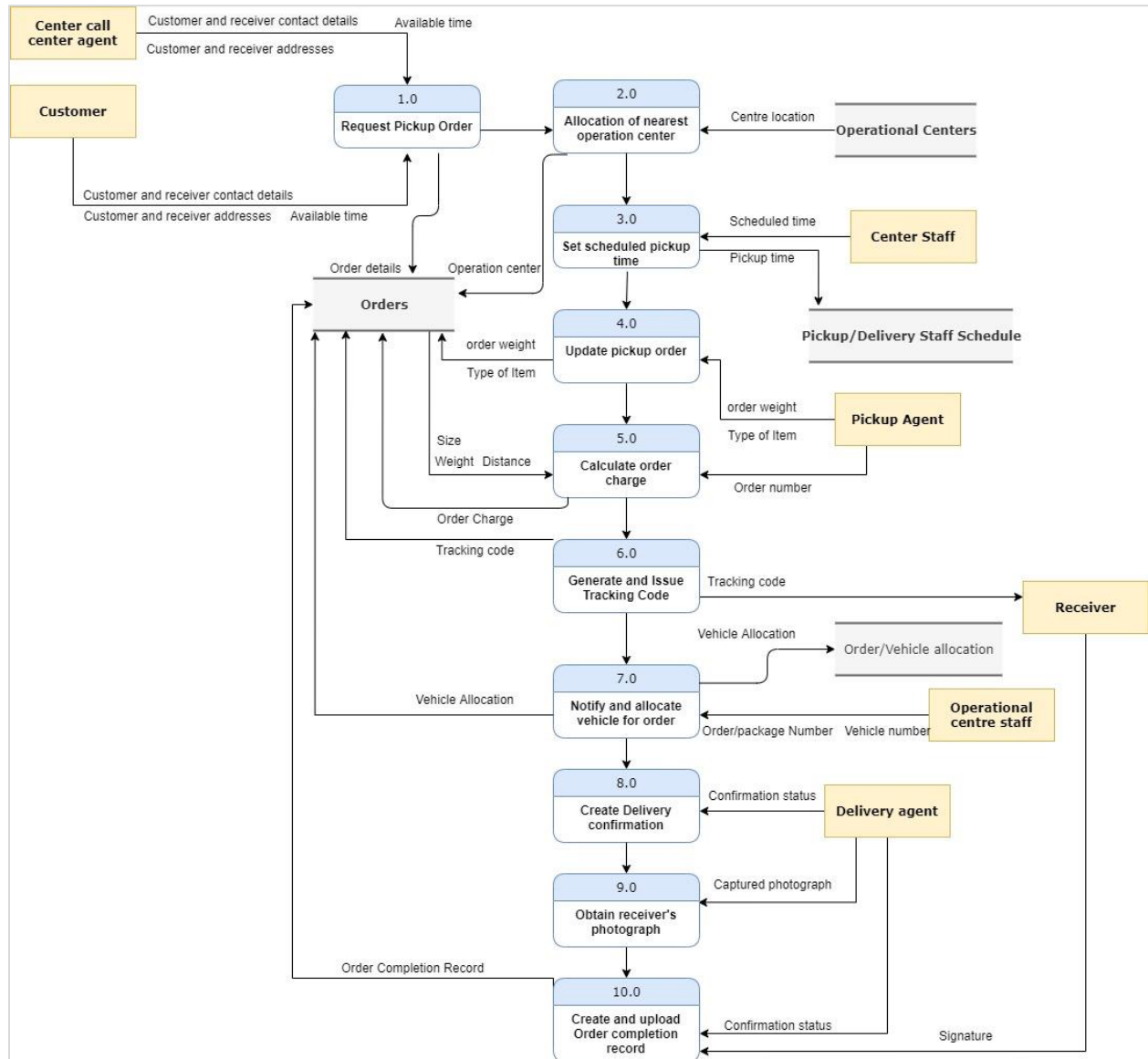


Figure 6: Data Flow Diagram

Class Diagram:

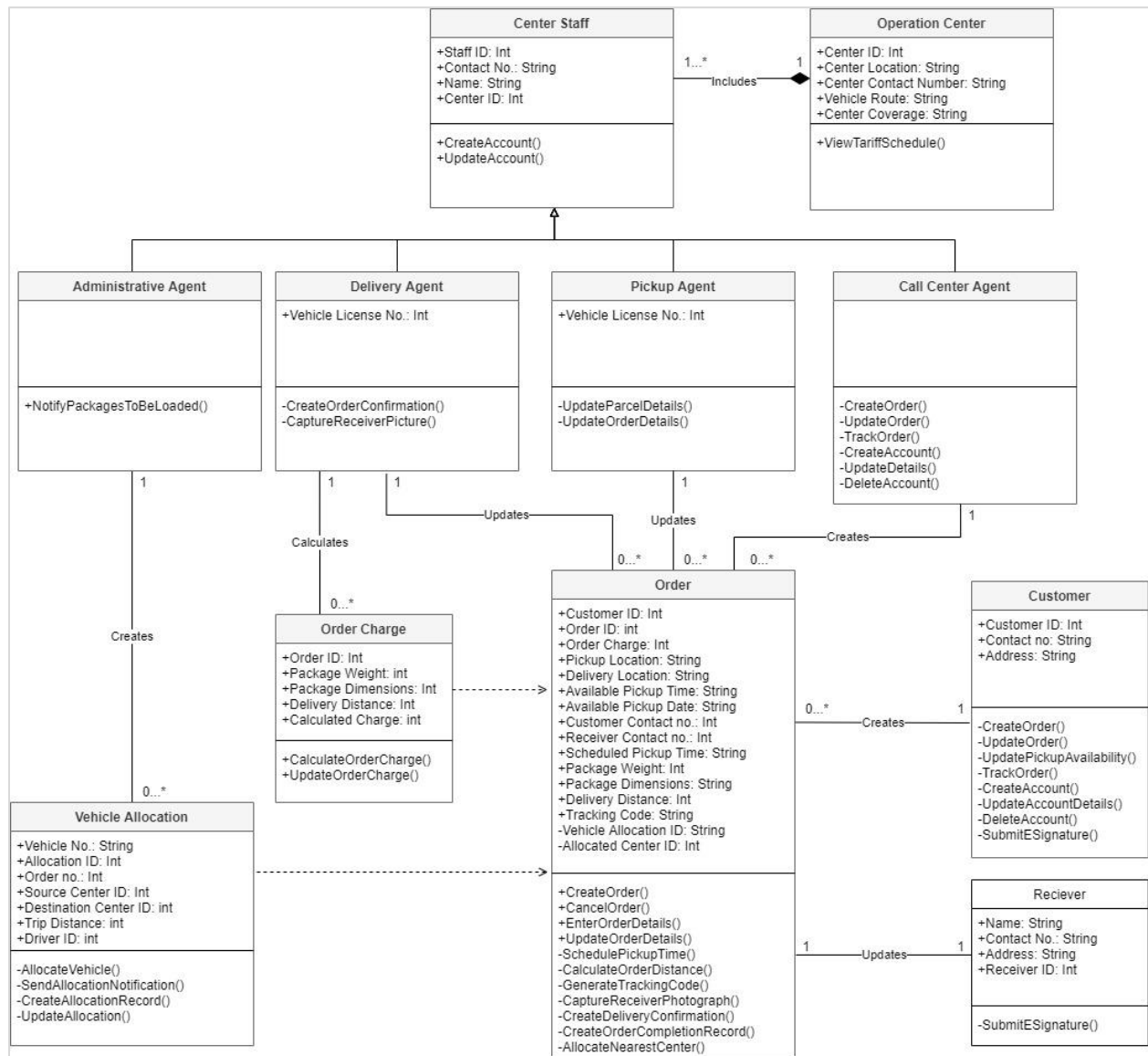


Figure 7: Class Diagram

3.5 System Architecture

The MVC (Model, View, Controller) architectural pattern will be used to construct the web application, which promotes code modularity and maintainability. It is a well-known software architecture that may be applied to a variety of frameworks and programming languages. The proposed software system is made up of several different components that work together to handle a variety of different business logic and database query activities.

The front-end interfaces for the functions that end-users must use can differ depending on their role. Across Business logic, database queries, and presentation, this software architecture logically isolates the source code and functions. Developers can manage the codebase with less complexity thanks to the enhanced modularity. Multiple developers will be able to maintain parts of the code independently, allowing for faster development and optimization.

The following are a few more reasons to use the MVC design pattern:

1. Because the code structure is defined as numerous levels in different source code files, it supports test-driven development and makes unit testing and debugging easy.
2. The MVC framework makes it simple to create different view components for your model component. It allows you to create several view components, allowing you to reduce code duplication by separating data and business logic.
3. Low code and quick development equate to lower costs. MVC facilitates rapid development, resulting in a shorter time to market. Even more so, with less money spent and a shorter learning curve.

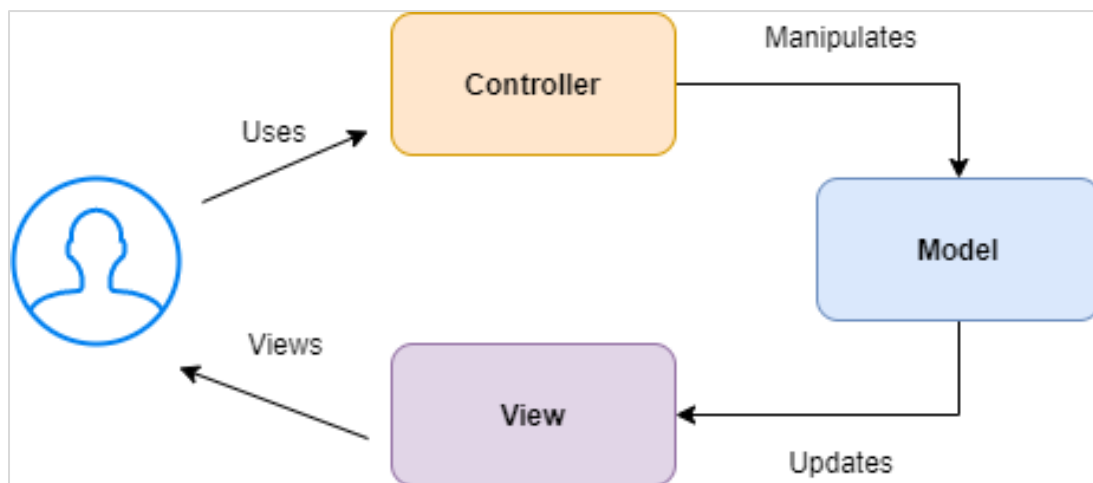


Figure 8: System architecture diagram

3.6 Software Development Methodologies

In profession consideration of the requirements of Pick&GO package delivery service. “Traditional” system development methodology would be implemented in the current project to develop an online pick requesting and delivering system. Traditional system development approaches employ a linear approach, with all operations and stages pre-organized and carried out in a sequential order. The analysis techniques are unidirectional, only following the stages that have been pre-planned. The project flow procedures would not be repeated once a planned stage has been completed. [1]

Under different types of tradition development methodologies, “Waterfall” method is intended the suit the requirements of Pick&GO. The waterfall model would be advantageous for the current project as it suggests a sequential project flow. The entire process would be broken down into multiple phases. Each phase should be completed before moving on to the next, without any overlapping.

The phases for the current project are described below;

01. Requirement Collection: The requirements for the system development are derived in consideration of Pick&GO system expectations to get a fundamental idea of the application to be designed.

02. System Analysis: Collected system and user requirements are effectively analysed against the intended solution of the current project, to assist the project planning.

03. System Design: System plans are initiated to develop the application. This includes stages of identifying system analysis methods, development methodologies and system architecture design.

04. Implementation: This phase includes the process of developing the planned system. Identified requirements and methodologies would be effectively used to start implementing the required system.

05. Software Testing: Once the application development is completed, the final application will be tested in order to test the functional effectiveness of the application.

Project Milestones:

Extended stages based on the overall project phases are mentioned below.

01. Requirement Collection.

- To evaluate the requirements provided by Pick&GO.
- To identify different users included in the system.
- To identify user requirements of the system.
- To identify the system requirements of the application.

02. System Analysis.

- To identify suitable system development approaches.
- To identify suitable development tools and technologies.

03. System Design.

- To identify the architectural requirement of the application.
- To design the system architecture of the application.
- To design the user interfaces of the application.

04. Implementation.

- To design and integrate a system database.
- To develop the system functionalities.

05. Software Testing.

- To test functional effectiveness of the system.
- To test the overall acceptance of the application.

3.7 Workplan

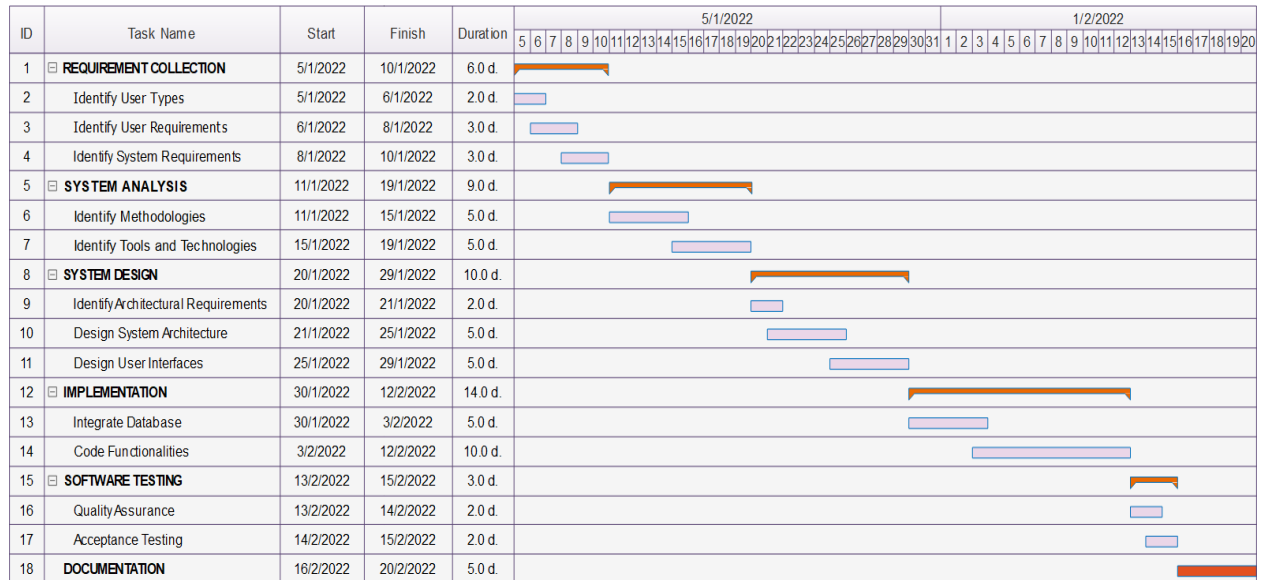


Figure 9: Project Workplan

4.0 Implementation

The users included in the current system are,

1. Admin
2. Operational Centre Staff
3. Customer

The development folder structure is shown below.

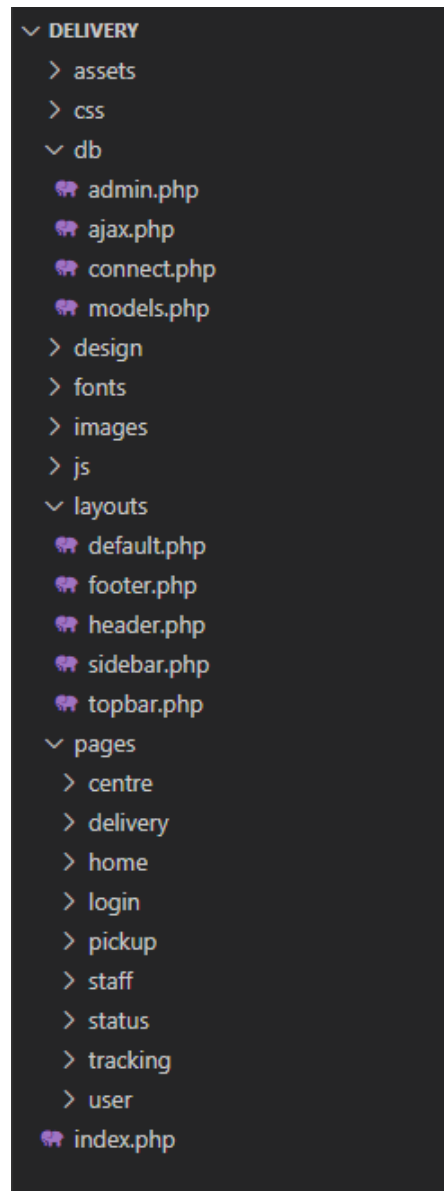
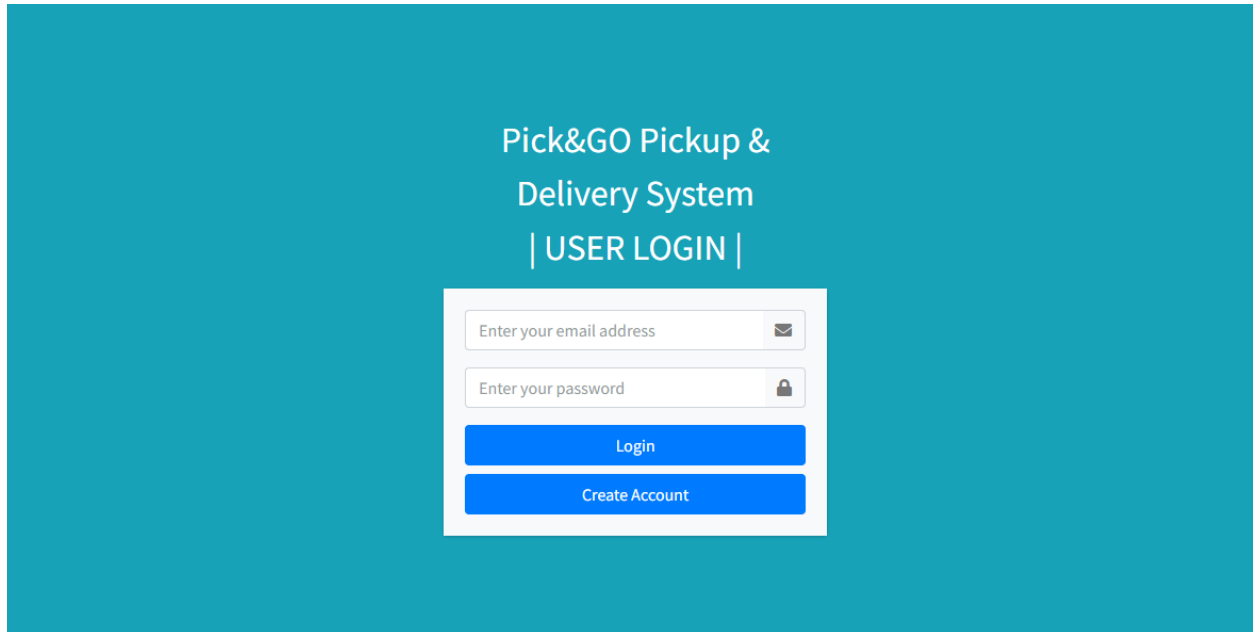


Figure 10: Implementation - folder structure

4.1 Functionalities

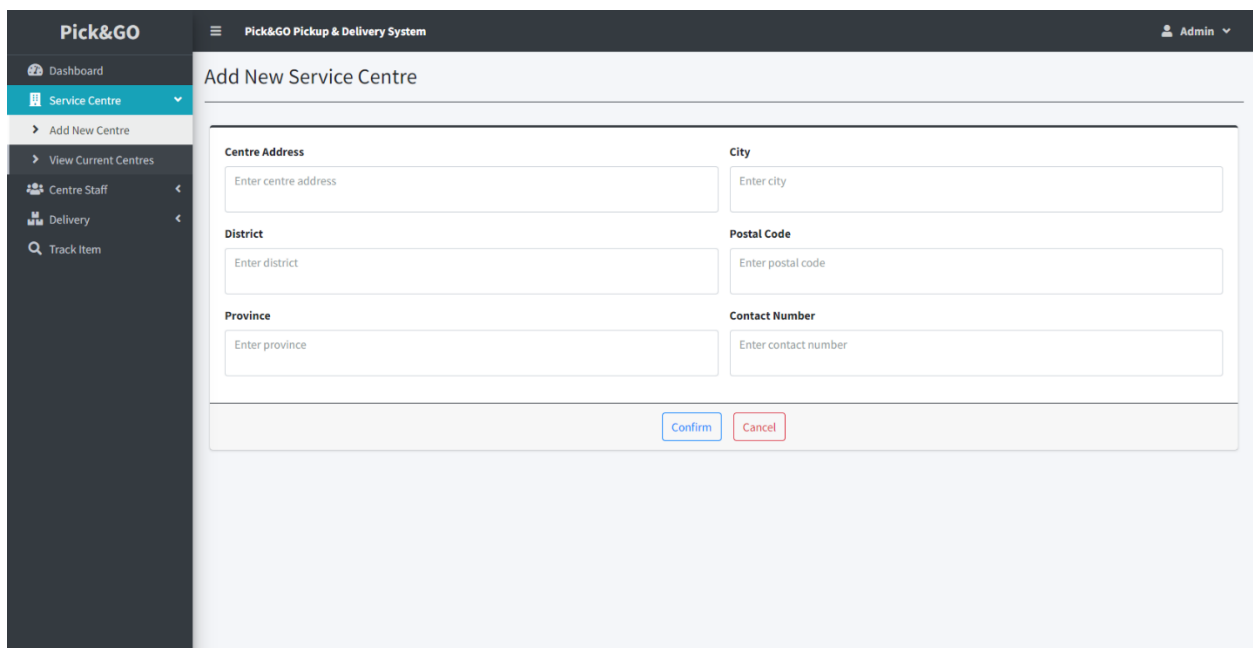
01. User login for application user. System roles are based on the user-level permissions.



The image shows a user login interface for the Pick&GO Pickup & Delivery System. The background is a solid teal color. In the center, there is a white rectangular box containing the login form. The form has two input fields: "Enter your email address" with an envelope icon and "Enter your password" with a lock icon. Below these fields are two blue buttons: "Login" and "Create Account". The text "Pick&GO Pickup & Delivery System | USER LOGIN |" is displayed above the form in white.

Figure 11: Function - user login

02. Add new operational service centre branch.



The image shows the "Add New Service Centre" form within the Pick&GO Pickup & Delivery System. The interface has a dark sidebar on the left with the "Pick&GO" logo and a menu including "Dashboard", "Service Centre", "Add New Centre", "View Current Centres", "Centre Staff", "Delivery", and "Track Item". The main content area has a header "Add New Service Centre" and a form with six input fields: "Centre Address", "City", "District", "Postal Code", "Province", and "Contact Number". Each field has a placeholder text "Enter [field name]". At the bottom of the form are two buttons: "Confirm" (blue) and "Cancel" (red).

Figure 12: Function - add new service centre

03. View or manage current operational service centre records.

Pick&GO Operational Service Centers

Dashboard Service Centre Add New Centre View Current Centres Centre Staff Delivery Track Item

Admin

Operational Service Centers

Add New Service Centre

Show 10 entries Search:

#	Centre ID	Address	City District Postal Code	Province	Contact Number	Action
1	w19AFZ7BkYtpUM	46, Main Road	Colombo 11, Colombo, 11204	Western	0761258795	
2	v4HKATW7LPXtmFD	46/90, Main Street	Kaduvela, Colombo, 105200	Western	0789541235	
3	w8iYXregSymf3Ru	67, James Street	Hatton, Nuwara Eliya, 201400	Central	0784357921	

Showing 1 to 3 of 3 entries Previous 1 Next

Figure 13: Function - view and manage service centre records

04. Update operational service centre record.

Pick&GO Edit Service Centre

Dashboard Service Centre Add New Centre View Current Centres Centre Staff Delivery Track Item

Admin

Centre Address: 67, James Street

City: Hatton

District: Nuwara Eliya

Postal Code: 201400

Province: Central

Contact Number: 0784357921

Confirm Cancel

Figure 14: Function - update operational service centre record

05. Add new operational service staff member, categorized by the specific branch.

The screenshot shows the 'Add New Staff Member' form within the Pick&GO Pickup & Delivery System. The left sidebar contains navigation options: Dashboard, Service Centre, Centre Staff (selected), Add New Staff, View Current Staff, Delivery, and Track Item. The main form area has the following fields:

- First Name:** Text input field with placeholder 'Enter first name'.
- Last Name:** Text input field with placeholder 'Enter last name'.
- Service Centre Branch:** Dropdown menu with placeholder 'Please select here'.
- Email:** Text input field with placeholder 'Enter email address'.
- Password:** Text input field with placeholder 'Create a strong password'.

At the bottom of the form are two buttons: 'Confirm' (blue) and 'Cancel' (red).

Figure 15: Function - add new operational service staff member

06. View or manage current service centre staff member records.

The screenshot shows the 'Service Centre Staff Members' table within the Pick&GO Pickup & Delivery System. The left sidebar is the same as in Figure 15. The main area displays a table with 3 entries. Above the table, there is a search bar and a 'Show 10 entries' dropdown. A green button 'Add New Staff Member' is in the top right corner. The table has columns for #, Staff, Email, Branch, and Action. Each row has edit and delete icons in the Action column. Below the table, it says 'Showing 1 to 3 of 3 entries' and has pagination links: Previous, 1 (selected), Next.

#	Staff	Email	Branch	Action
1	David White	david67@outlook.com	67, James Street, Hatton, Nuwara Eliya, 201400, Central	
2	Henry Anderson	henry@gmail.com	46, Main Road, Colombo 11, Colombo, 11204, Western	
3	Jenniston Peter	james45@yahoo.com	46/90, Main Street, Kaduwela, Colombo, 105200, Western	

Figure 16: Function - view or manage current service centre staff member records

07. Update service centre staff member record.

Pick&GO | Pick&GO Pickup & Delivery System | Admin

Edit Staff Member

First Name: David

Last Name: White

Service Centre Branch: w8lYKregSymf3Ru | 67, James Street, Hatton, Nuwara Eliya, 201400, Central

Email: david67@outlook.com

Password: Create a strong password

[Confirm](#) [Cancel](#)

Figure 17: Function - update service centre staff member record

08. Add new pickup item with sender and receiver information.

Pick&GO | Pick&GO Pickup & Delivery System | Admin

Add New Pickup Item

Sender Information

Full Name: Enter sender full name

Address: Enter sender address

Contact Number: Enter sender contact number

Receiver Information

Full Name: Enter receiver full name

Address: Enter receiver address

Contact Number: Enter receiver contact number

Type: Delivery

Nearest Pickup Branch: Please select here

Item Details

Weight (KG)	Height (CM)	Length (CM)	Width (CM)	Cost (Rs.)		
Enter weight in KG	Enter height in CM	Enter length in CM	Enter width in CM	Enter cost in Rs.	✖	
Overall Cost (Rs.)				0.00	0.00	+

[Confirm](#) [Cancel](#)

Figure 18: Function - add new pickup item

09. View or manage current item pickup and delivery records.

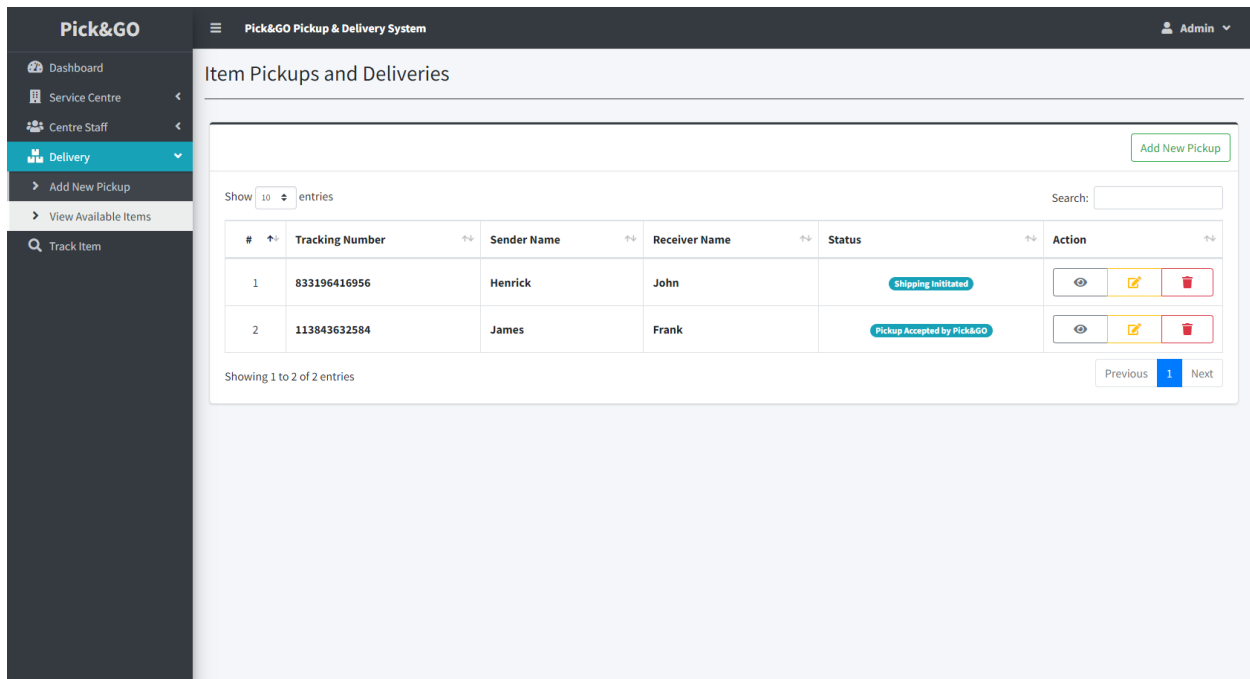


Figure 19: Function - view or manage current item pickup and delivery records

10. Update item pickup or delivery record.

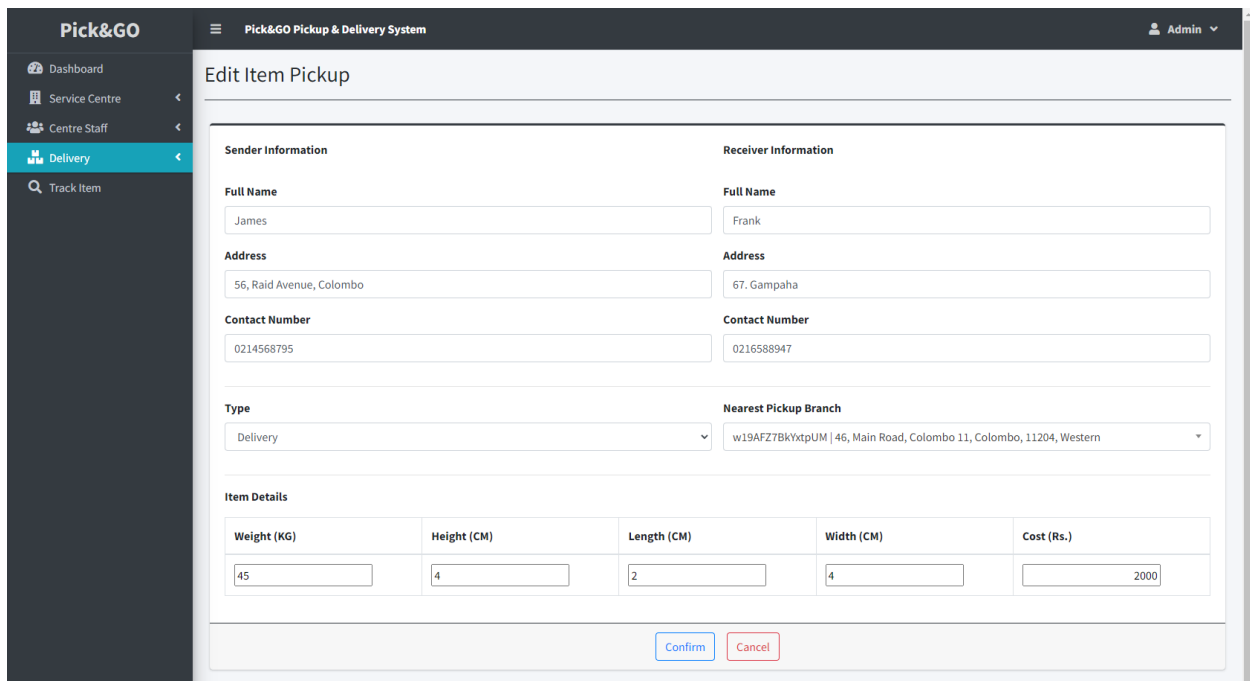


Figure 20: Function - update item pickup or delivery record

11. View specific item pickup record.

The screenshot shows a modal window titled "Item Pickup Information" with a sidebar menu on the left containing "Dashboard", "Service Centre", "Centre Staff", "Delivery", "Add New Pickup", "View Available Items", and "Track Item". The modal is divided into three main sections: "Tracking Number", "Sender Information", and "Receiver Information".

Tracking Number: 833196416956

Sender Information

- Sender Full Name: Henrick
- Sender Address: 56e, Kalutara
- Sender Contact Number: 0215468755

Receiver Information

- Receiver Full Name: John
- Receiver Address: 58s, Colombo 06
- Receiver Contact Number: 0124579324

Item Details

- Weight: 45
- Height: 54
- Cost: 1,000.00
- Width: 54
- Length: 54
- Type: Pickup

Pickup Accepting Center: 46, Main Road, Colombo 11, Colombo, 11204, Western

Nearest Pickup Center: 46, Main Road, Colombo 11, Colombo, 11204, Western

Status: Shipping Initiated [Update Status]

An "Exit" button is located at the bottom right of the modal.

Figure 21: Function - view specific item pickup record

12. Update specific item pickup record's delivery status.

The screenshot shows the "Update Delivery Status for 113843632584" modal. It features a "Status" dropdown menu with the following options: "Pickup Accepted by Pick&GO", "Collected", "Shipping Initiated", "In-Transit", "Arrived At Destination", "Delivery Initiated", "Pickup Initiated", "Delivered", "Pickup Successful", and "Failed Delivery Attempt". The background shows a table of item pickups and deliveries.

#	Tracking Number	Sender	Receiver	Status	Action
1	833196416956	Henrick	John	Shipping Initiated	[View] [Edit] [Delete]
2	113843632584	James	Frank	Pickup Accepted by Pick&GO	[View] [Edit] [Delete]

Showing 1 to 2 of 2 entries

Previous 1 Next

Figure 22: Function - update specific item pickup record's delivery status

13. Create new customer account.

The screenshot shows the 'New Customer' form within the 'Pick&GO Pickup & Delivery System' interface. The form is titled 'New Customer' and contains four input fields: 'First Name' (placeholder: 'Enter first name'), 'Last Name' (placeholder: 'Enter last name'), 'Email' (placeholder: 'Enter email address'), and 'Password' (placeholder: 'Create a strong password'). Below the input fields are two buttons: 'Confirm' (blue) and 'Cancel' (red). The form is set against a light blue background with a dark grey header bar.

Figure 23: Function – create new customer account

14. Track specific item pickup record's delivery status using its unique tracking number.

The screenshot shows the 'Track Item Delivery' form within the 'Pick&GO Pickup & Delivery System' interface. The form is titled 'Track Item Delivery' and contains a single input field with the placeholder text 'Enter your item tracking number here'. To the right of the input field is a green search button with a magnifying glass icon. The form is set against a light blue background with a dark grey header bar. On the left side, there is a sidebar menu with the following items: 'Dashboard', 'Service Centre', 'Centre Staff', 'Delivery', and 'Track Item' (which is highlighted in blue). The top right corner of the header bar shows the user 'Admin' with a dropdown arrow.

Figure 24: Function - track specific item pickup record's delivery status

The system's web based mobile application views would look exactly like the web application as it utilizes web-based technology. For example, the system user login page would look as follows;

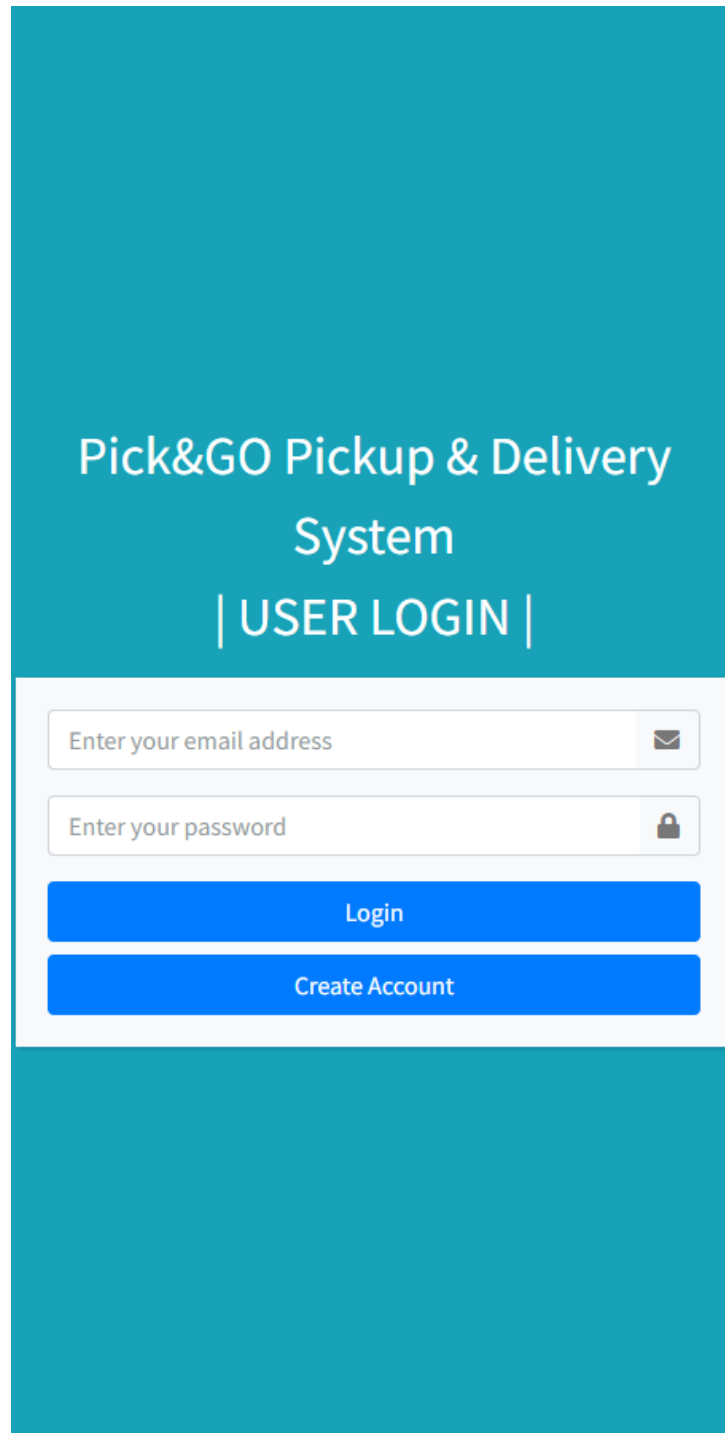
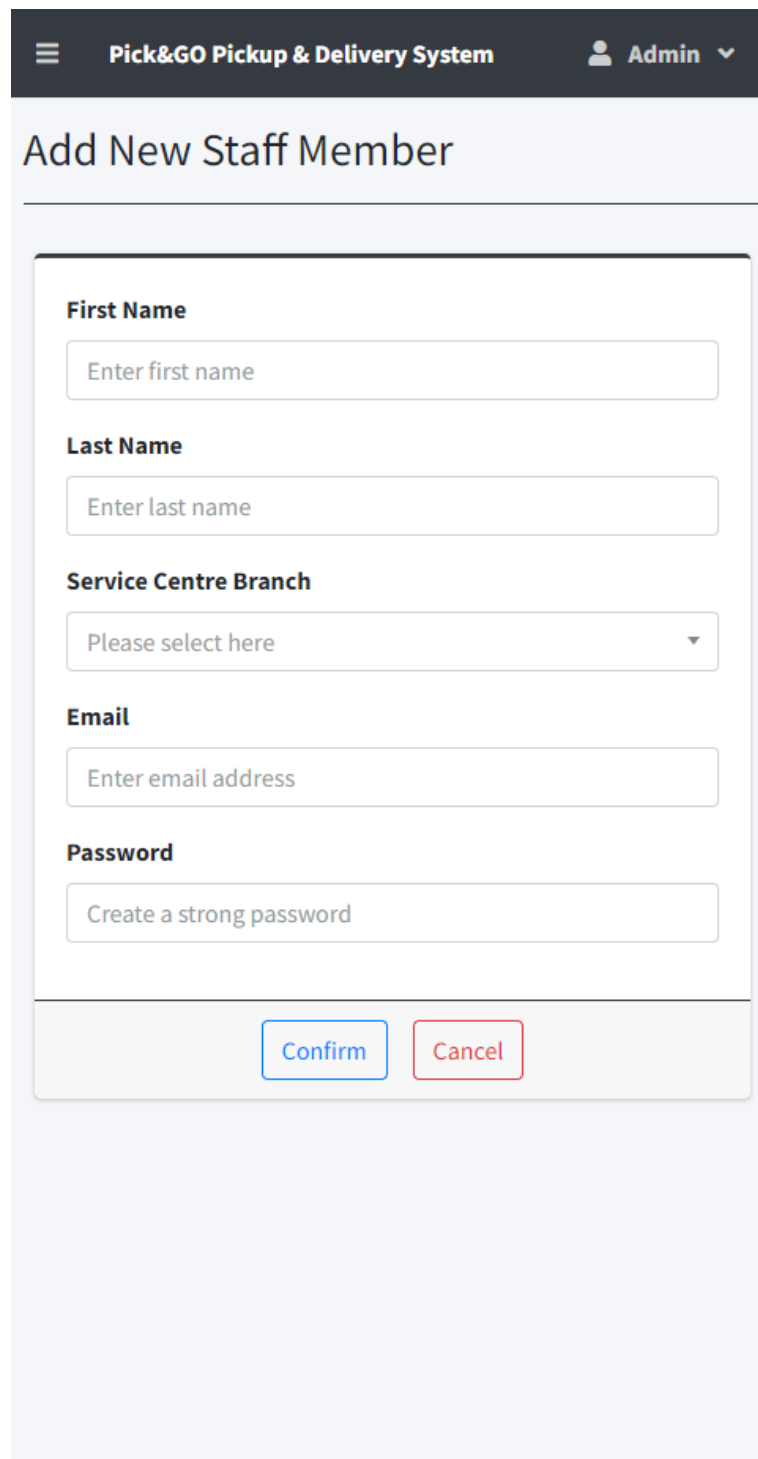
The image shows a mobile application interface for the 'Pick&GO Pickup & Delivery System'. The background is a solid teal color. In the center, the text 'Pick&GO Pickup & Delivery System' is displayed in white, followed by '| USER LOGIN |' in a slightly smaller white font. Below this text is a white rectangular box containing the login form. The form has two input fields: the first is labeled 'Enter your email address' with an envelope icon on the right, and the second is labeled 'Enter your password' with a padlock icon on the right. Below these fields are two blue buttons: the top one is labeled 'Login' and the bottom one is labeled 'Create Account'.

Figure 25: Function - user login - mobile view

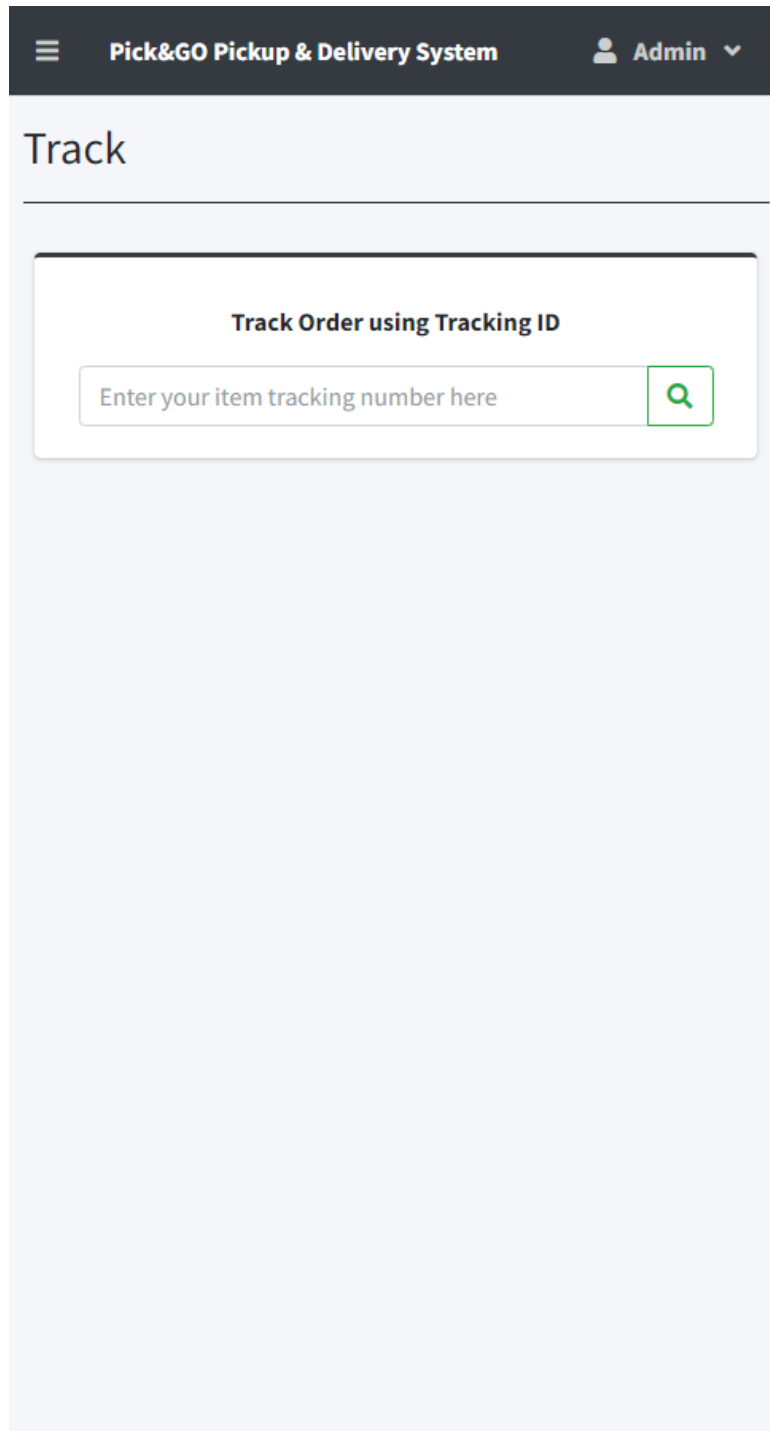
Forms on the mobile app would be just resized in mobile view, but the functional backend would be working just as intended on the web application. Below shown is an example of forms in mobile view.



The screenshot displays a mobile application interface for the 'Pick&GO Pickup & Delivery System'. At the top, a dark header bar contains a hamburger menu icon, the system name, and a user profile labeled 'Admin' with a dropdown arrow. Below the header, the title 'Add New Staff Member' is centered. The form itself is a white card with a thin border, containing five input fields: 'First Name' (placeholder: 'Enter first name'), 'Last Name' (placeholder: 'Enter last name'), 'Service Centre Branch' (a dropdown menu with 'Please select here' and a downward arrow), 'Email' (placeholder: 'Enter email address'), and 'Password' (placeholder: 'Create a strong password'). At the bottom of the card, there are two buttons: a blue 'Confirm' button and a red 'Cancel' button.

Figure 26: Function - forms - mobile view

The most essential feature on the mobile application would be the ability for system users to track pickup item delivery status using a unique user tracking number.



The image shows a mobile application interface for a pickup and delivery system. At the top, there is a dark header bar with a hamburger menu icon on the left, the text "Pick&GO Pickup & Delivery System" in the center, and a user profile icon with the text "Admin" and a dropdown arrow on the right. Below the header, the word "Track" is displayed in a large, bold font. A horizontal line separates the title from the main content area. In the center of the screen, there is a white rectangular box with a thin black border. Inside this box, the text "Track Order using Tracking ID" is centered. Below this text is a text input field with the placeholder text "Enter your item tracking number here". To the right of the input field is a green square button with a white magnifying glass icon.

Figure 27: Function - track item delivery - mobile view

4.2 Development Tools Utilization

Visual Studio Code:

Initially, for the entire development process of the online pick requesting and delivering system, Visual Studio Code development environment has been utilized. Visual studio code is an open-source and free application source-code editing software development environment developed by Microsoft. The editor is included with essential application development features along with an efficient interface, ideal for any sort of application development. Visual studio code has been utilized as the development environment for the current project due to its advanced development features with straightforward system structural concepts.

The snippet below shows the utilization of visual studio code for system development.

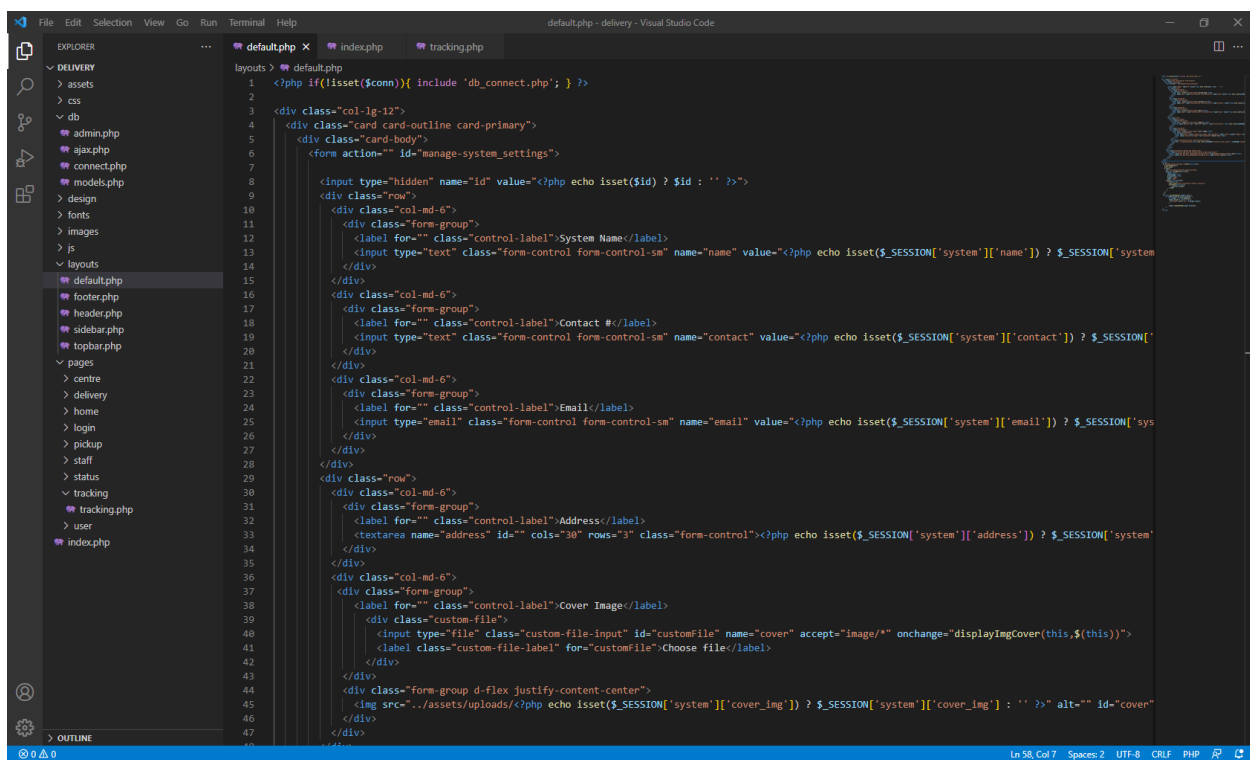


Figure 28: Visual studio code utilization

XAMPP:

Web server software is a special application precisely intended to transform usual computers into virtual web servers. These software applications are crucial in application development, testing, quality assurance and system evaluation of web application development projects.

XAMPP is a web server host which was used to test the web application locally, with an active MySQL database connection. XAMPP was utilized in the current project during development and testing phases in order to configure and run the web application. Snippet for XAMPP utilization is shown below.

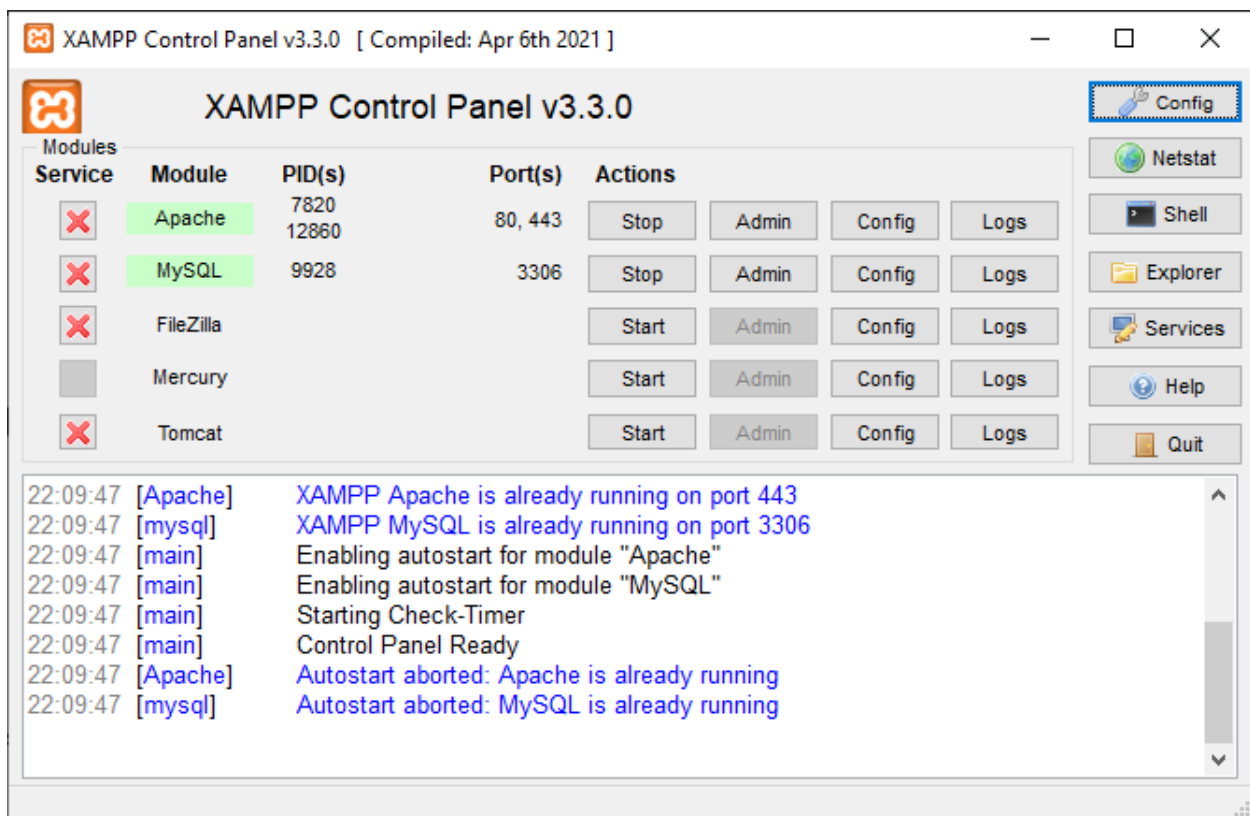


Figure 29: XAMPP server utilization

4.3 Collaboration Tools Utilization

GitHub:

GitHub is a cloud-based internet hosting service allowing developers to manage software application source code, with the ability to collaborate development groups on software projects. GitHub is also consisted of advanced software development technologies such as version controls to manage applications.

GitHub was utilized in the current project so that multiple developers would be able to work on their specific development components individually, at the same time itself. The overall application system source code would be hosted through GitHub where each developer could access and update system components.

Snippets for GitHub utilization for the current web application project is shown below.

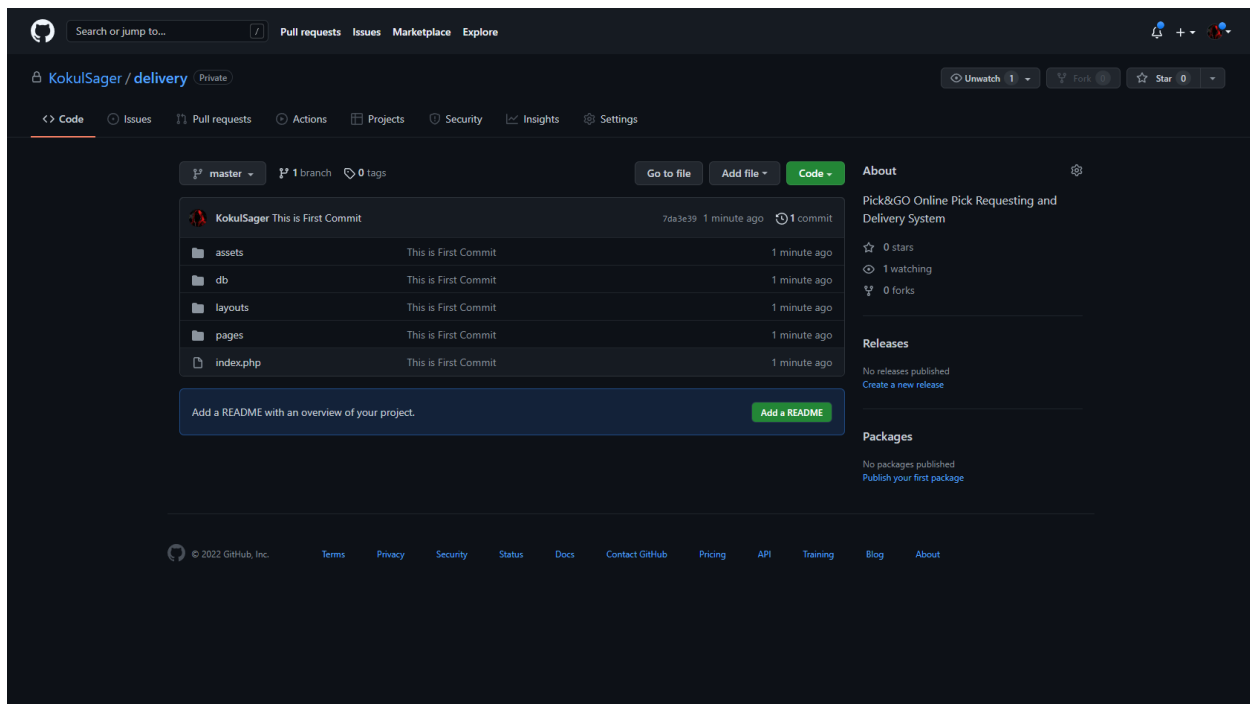


Figure 30: GitHub utilization 1

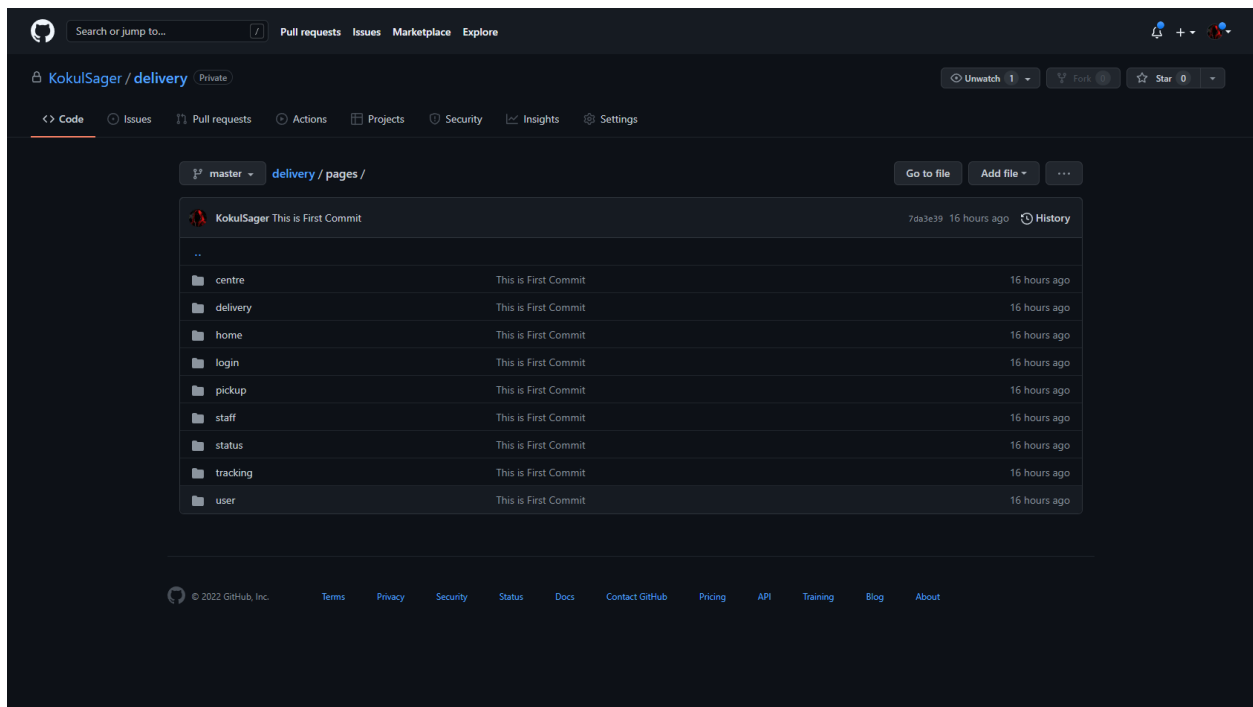


Figure 31: GitHub utilization 2

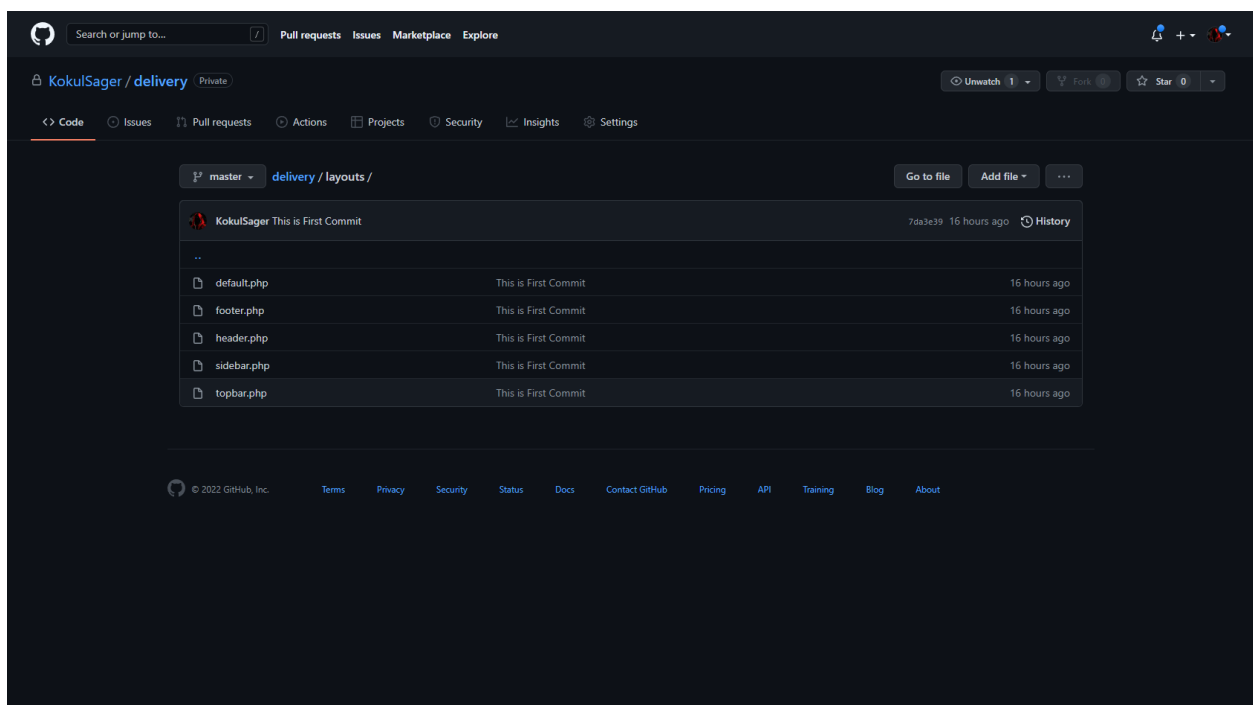


Figure 32: GitHub utilization 3

Trello:

Trello is a web-based project tasks management tool which allows multiple developers to collaborate and manage projects effectively. Trello was utilized in the current project to add, view and track the tasks during various development phases of the current web application by leveraging cards.

Snippets for Trello utilization for the current web application project is shown below.

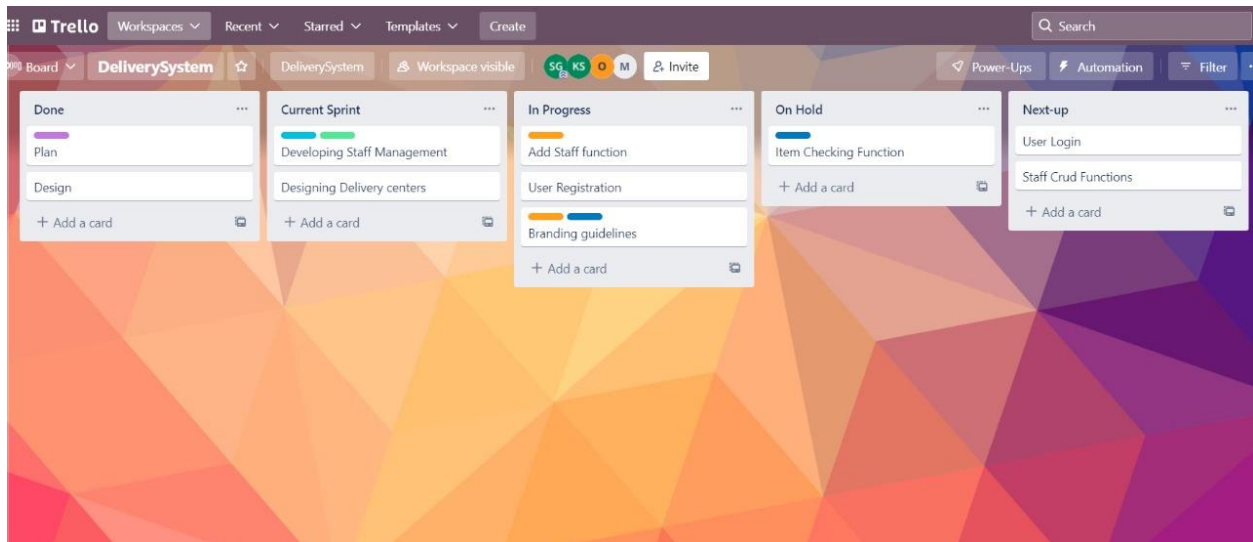


Figure 33: Trello utilization 1

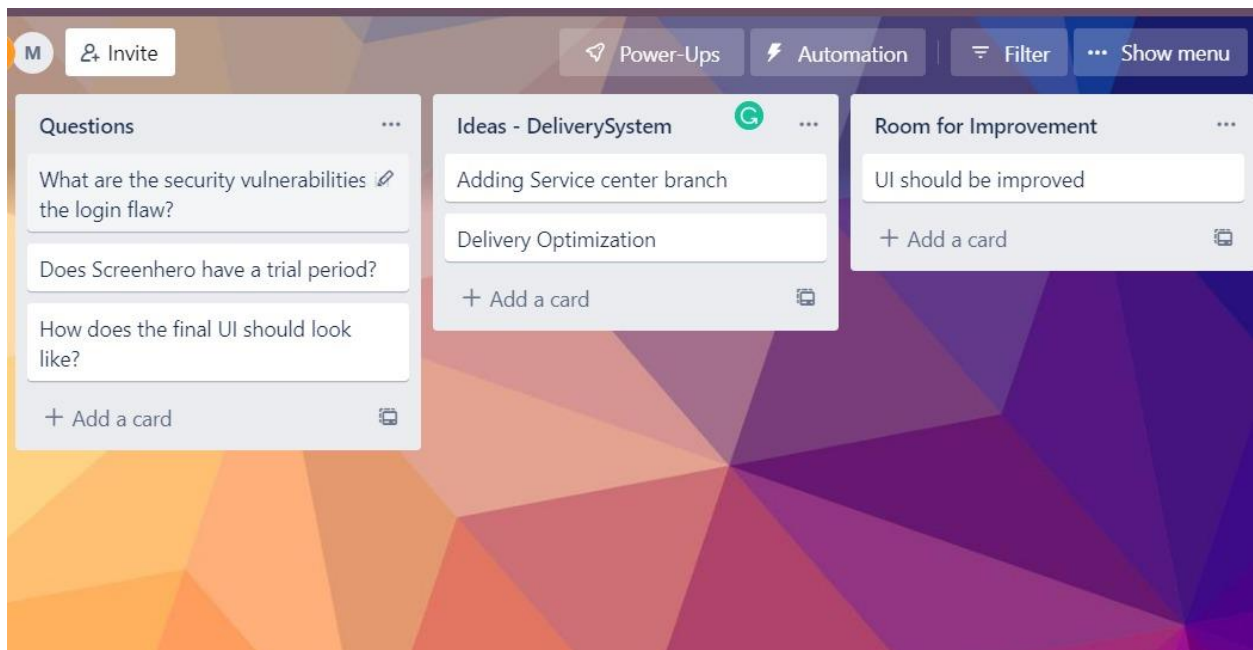


Figure 34: Trello utilization 2

5.0 Software Testing Design

Pick&GO

Online Pick Requesting and Delivery System

- SOFTWARE TESTING DESIGN -

5.1 Acceptance Testing

Acceptance testing is an essential type of software testing type which bases on verifying if the system functionalities could be accepted before application finalization. Essential functionalities are tested and compared against the initial requirements to make sure that the final application could be accepted. This testing methodology has been selected to test the overall functionalities of the Pick&GO application.

Test Scope:

The major scope of the current testing design is to make sure that the online pick requesting and delivering system meets the proper requirements stated by Pick&GO. Testing the system would be considered as an essential procedure as it determines if the final application would actually be useful for the end user.

Test Objectives:

- Test essential parts of the Pick&GO web application for proper functionalities.
- Verify if the application meets the initial requirement analysis.
- Check whether the initial system analysis has been implemented for development.
- Test the user experience and efficiency of the application.

Test Approach:

Acceptance testing for Pick&GO application would be done in a step-by-step procedure, as shown below;

1. Use a common test case template for each functionality testing.
2. Test overall functionalities of the system along with their component separations.
3. Include evidence for each function component under testing.

Test Case Template:

Table 4: Acceptance testing - test case template

Tester Name				
Test Description				
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (Pass/Fail)

Testing Targets:*Table 5: Acceptance testing - targets*

Test Targets for Pick&GO Pickup & Delivery System		
Test Case ID	Test Description	Test Date
01	Logging into the system.	17/02/2021
02	Create customer account	17/02/2021
03	Profile bar	17/02/2021
04	Add new Service Centre branch	17/02/2021
05	View, Edit, Delete service centre branch records	17/02/2021
06	Add new staff record	18/02/2021
07	View, edit and delete staff records	18/02/2021
08	Add new pickup record	18/02/2021
09	View, edit and delete item records	18/02/2021
10	Track deliveries	18/02/2021

Test Implementation:

01. Logging into the system.

Table 6: Acceptance test case 01

Tester		Mathan		
Test Description		Logging into the system		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
1.1	Enter correct username and password	Successful login and redirection to system dashboard	Successful login and redirection to system dashboard	PASS
1.2	user name or Password is wrong	username or password is incorrect message should popup	username or password is incorrect message popped up	PASS
1.3	Click the add button without filling boxes	you have to fill the details” should message popup	you have to fill the details” message popup	PASS

Evidence:

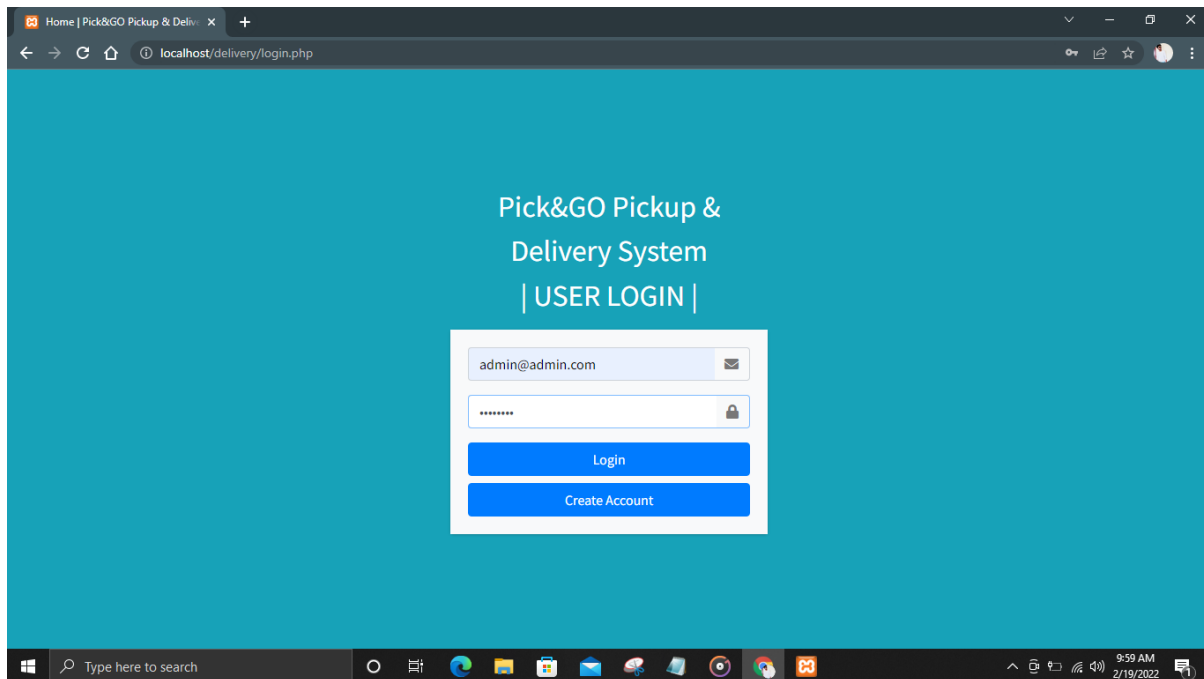


Figure 35: Acceptance test case 01 - evidence 01

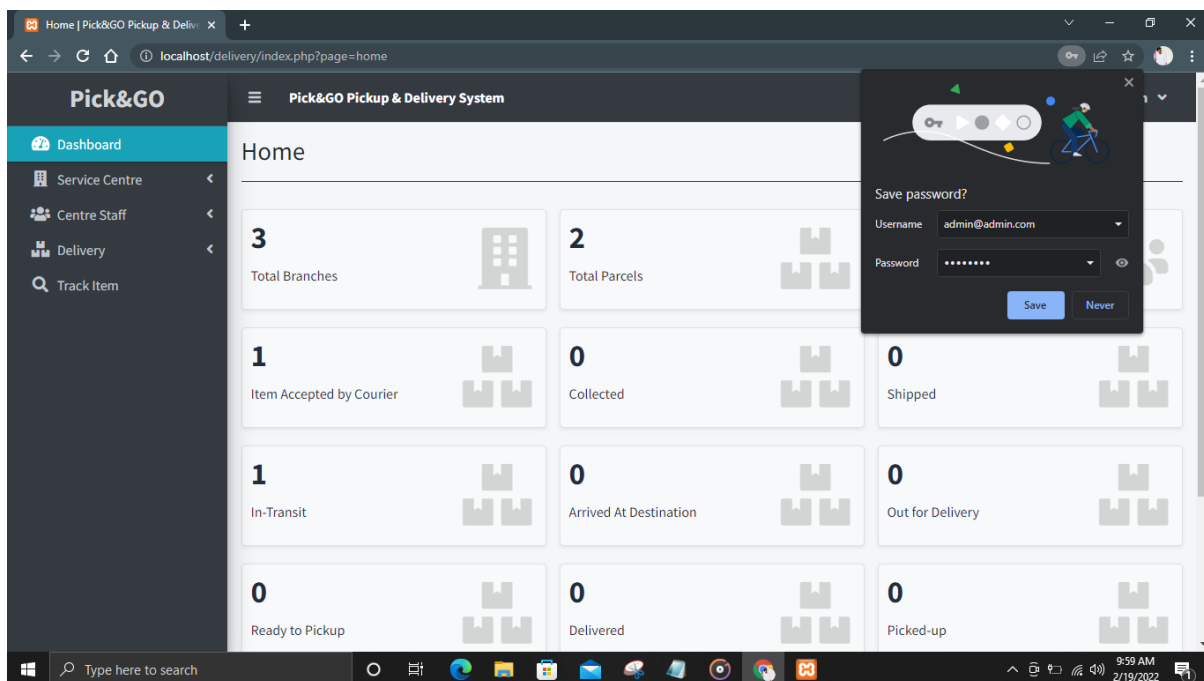


Figure 36: Acceptance test case 01 - evidence 02

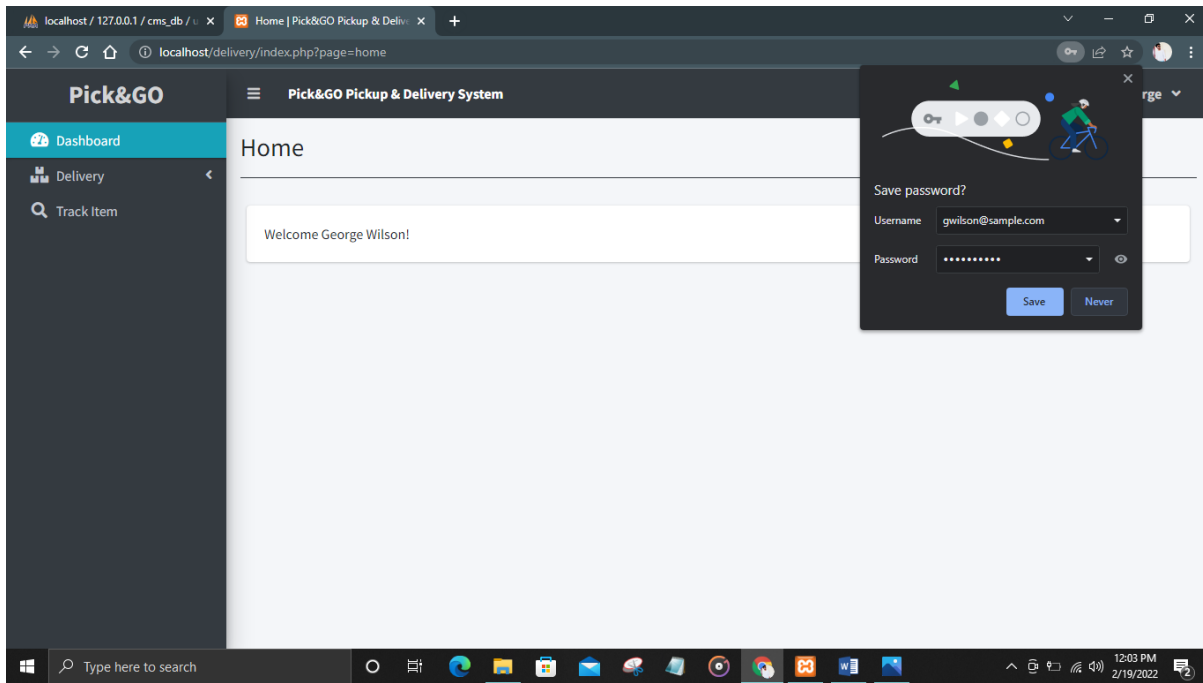


Figure 37: Acceptance test case 01 - evidence 03

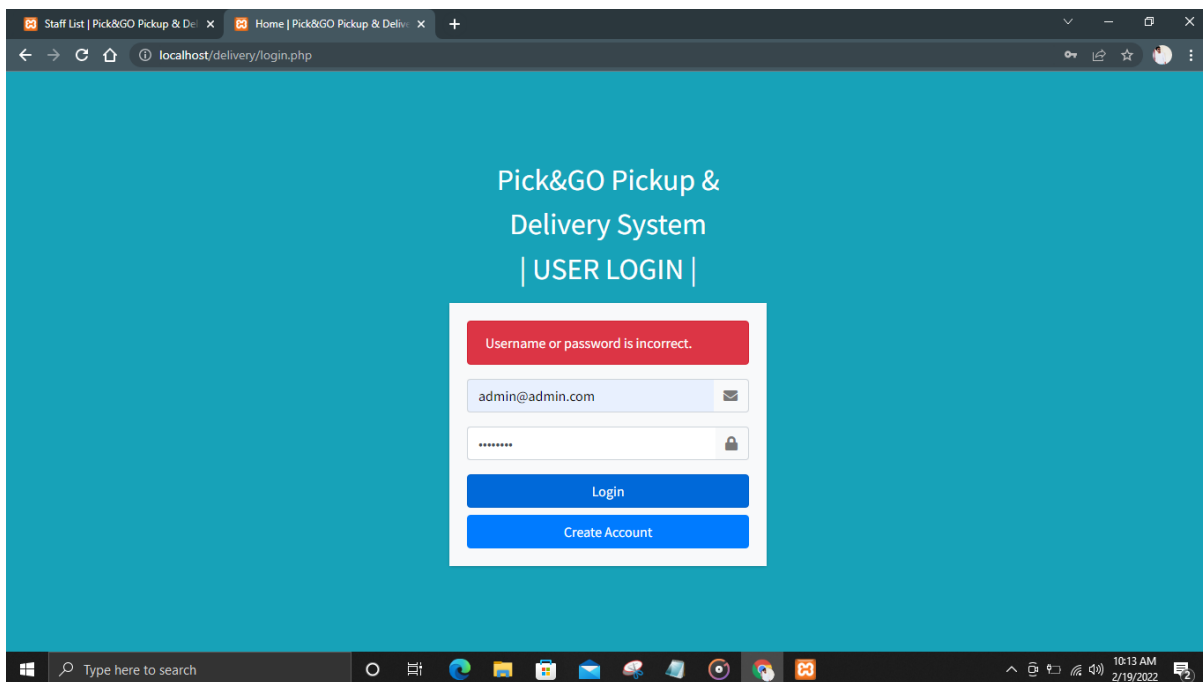


Figure 38: Acceptance test case 01 - evidence 04

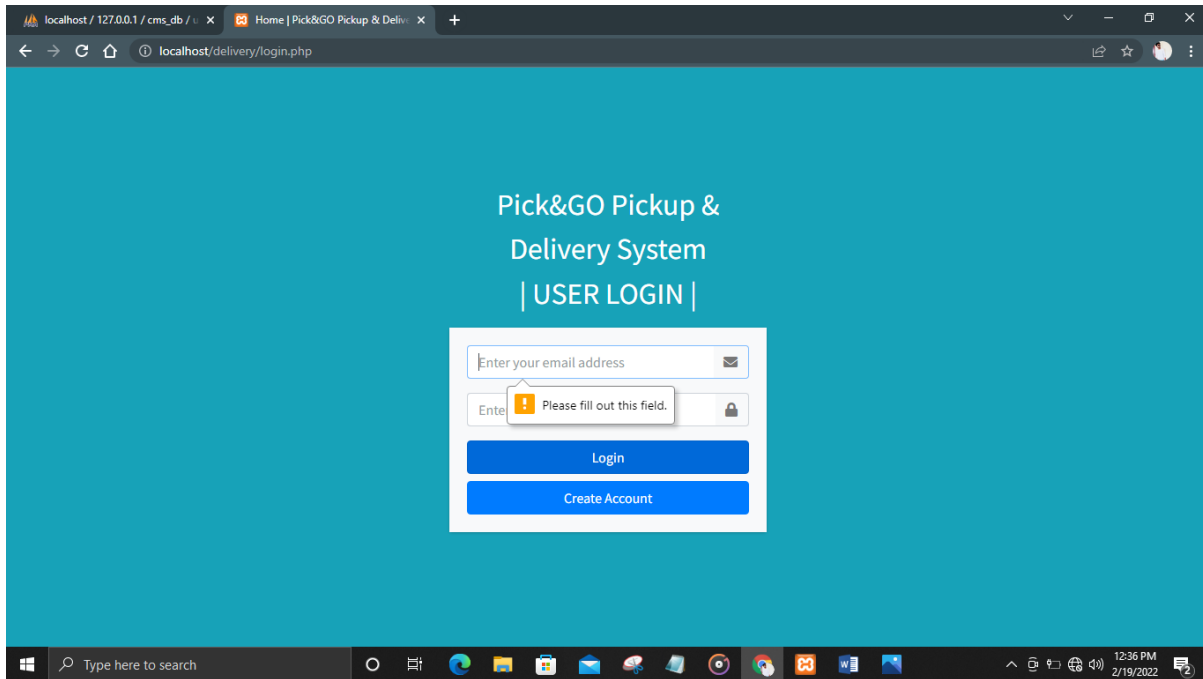


Figure 39: Acceptance test case 01 - evidence 05

02. Create customer account.

Table 7: Acceptance test case 02

Tester		Kogul Sager		
Test Description		Create customer account		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
2.1	Click the create account	Should Open the create new account page	Opened the create new account page	PASS
2.2	Fill all details and click confirm button	Data saved successfully message should popup	Data saved successfully message popped up	PASS
2.3	Click the Cancel button	Operation should cancel.	Operation cancelled	PASS

Evidence:

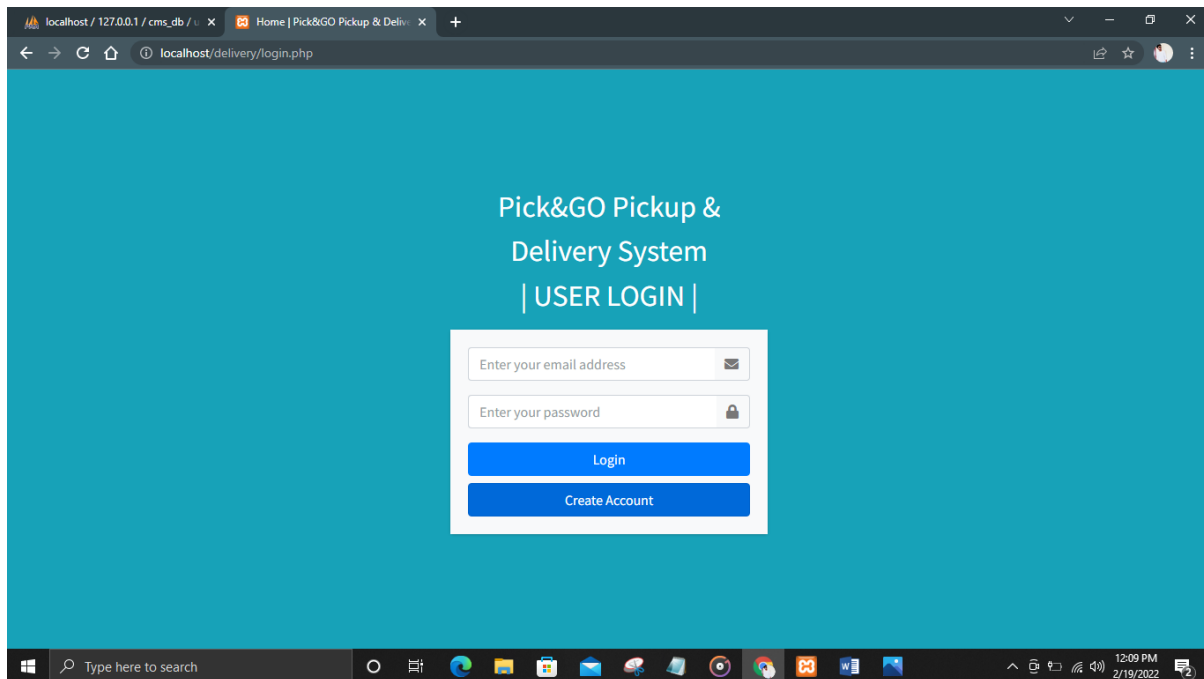


Figure 40: Acceptance test case 02 - evidence 01

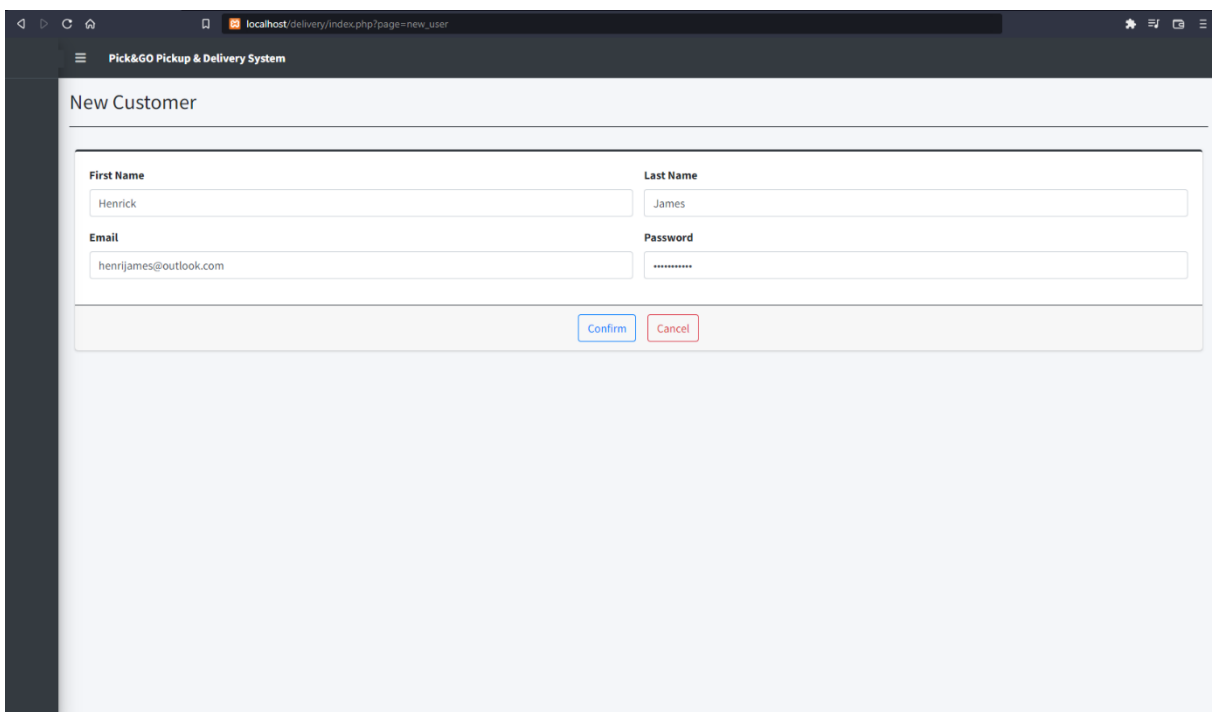


Figure 41: Acceptance test case 02 - evidence 02

localhost/delivery/index.php?page=new_user

Pick&GO Pickup & Delivery System

Data successfully saved

New Customer

First Name Henrick	Last Name James
Email henrjames@outlook.com	Password *****




Figure 42: Acceptance test case 02 - evidence 03

03. User profile management.

Table 8: Acceptance test case 03

Tester		Tuan Saad		
Test Description		User profile management		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
3.1	Click the Admin button	Should Open the options buttons	Opened the options buttons	PASS
3.2	Click the Edit account button	Should Open the Manage account page	Opened the Managed account paged	PASS
3.3	Fill the already used account user name	User name already exit message should popup	User name already exit message popped up	PASS
3.4	Fill different details and click save button	Details should save successfully	Details saved message should popped up	PASS

Evidence:

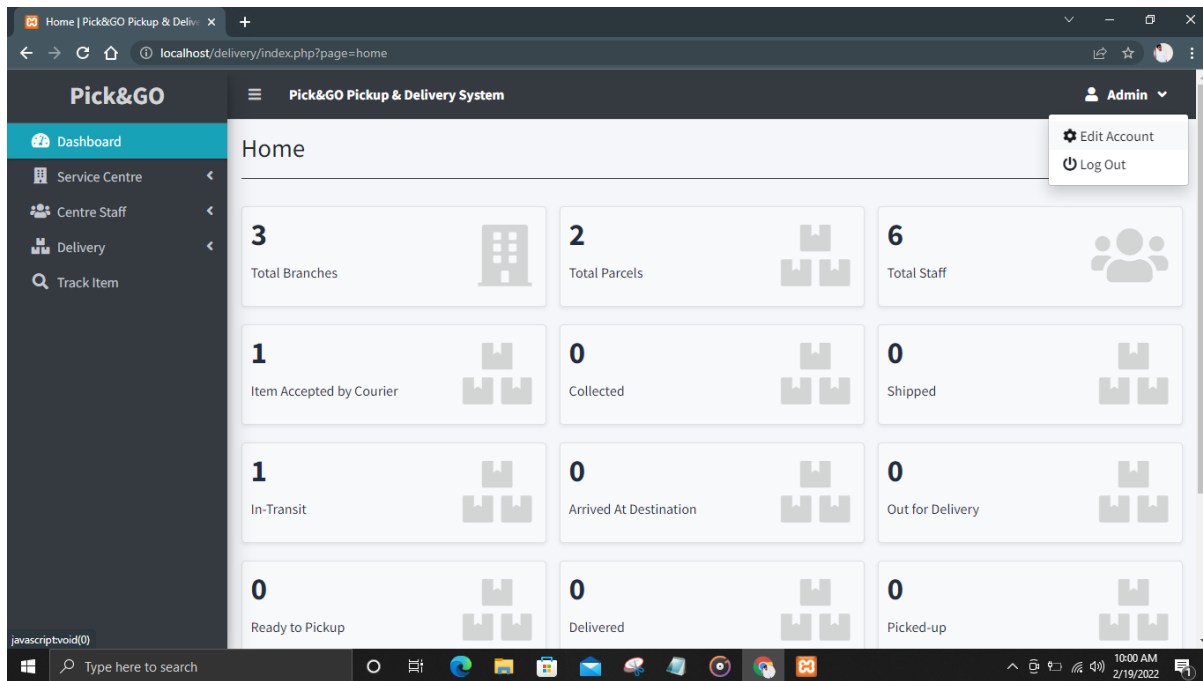


Figure 43: Acceptance test case 03 - evidence 01

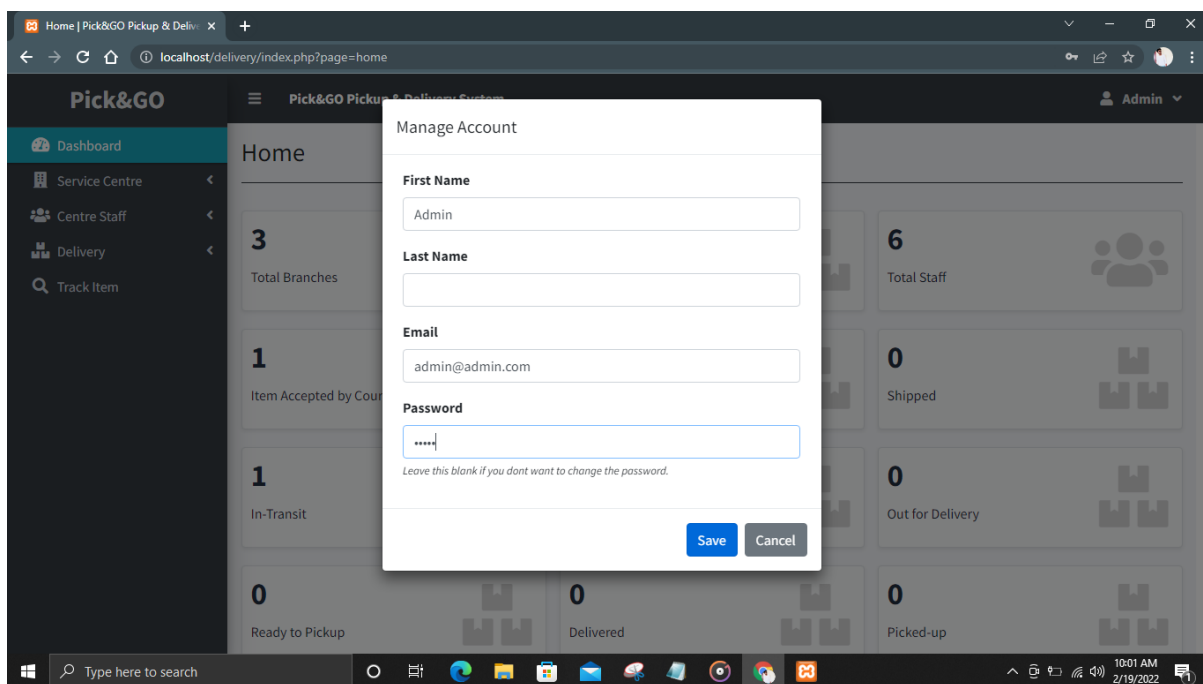


Figure 44: Acceptance test case 03 - evidence 02

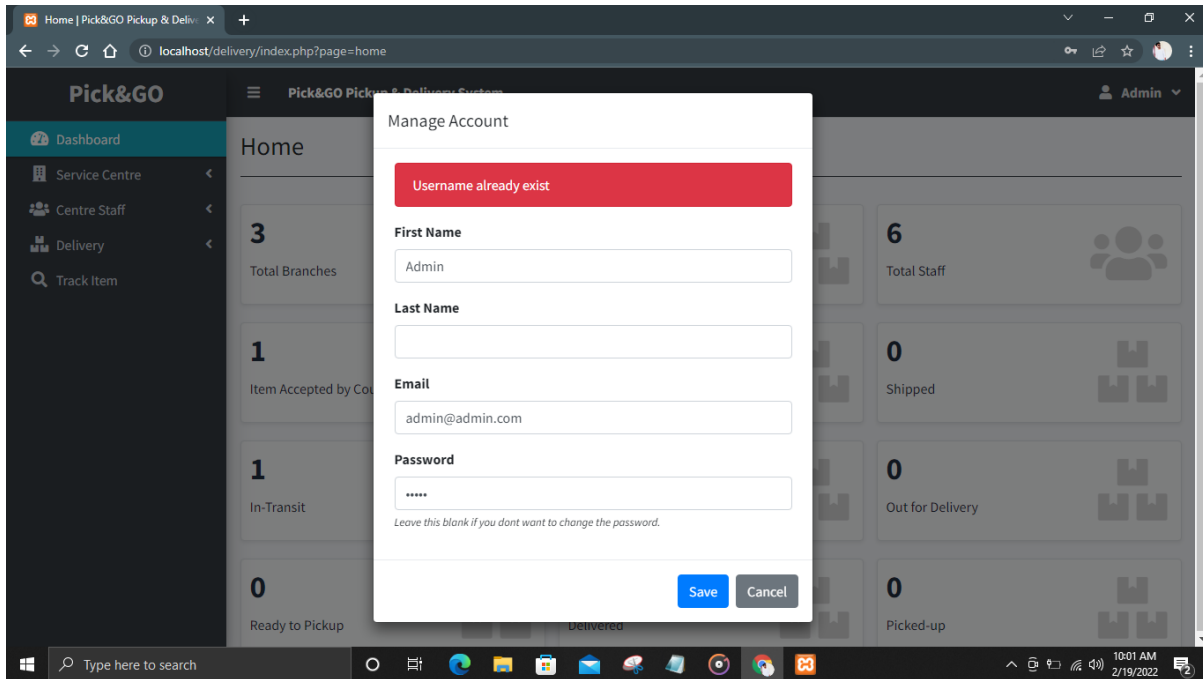


Figure 45: Acceptance test case 03 - evidence 03

04. Add new service centre branch.

Table 9: Acceptance test case 04

Tester		Mathan		
Test Description		Add new service centre branch		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
4.1	Click the add new centre button	Should Open the add new branch page	Opened the add new branch page	PASS
4.2	Fill all details and click confirm button	Data saved successfully message should popup	Data saved successfully message popped up	PASS
4.3	Click the Cancel button	Operation should cancel.	Operation cancelled	PASS

Evidence:

The screenshot shows a web browser window with the URL `localhost/delivery/index.php?page=new_branch`. The application is titled "Pick&GO Pickup & Delivery System" and the user is logged in as "Mathan". The left sidebar contains a menu with options: Dashboard, Service Centre (selected), Add New Centre, View Current Centres, Centre Staff, Delivery, and Track Item. The main content area is titled "New Branch" and contains a form with the following fields:

Centre Address	City
<input type="text" value="Enter centre address"/>	<input type="text" value="Enter city"/>
District	Postal Code
<input type="text" value="Enter district"/>	<input type="text" value="Enter postal code"/>
Province	Contact Number
<input type="text" value="Enter province"/>	<input type="text" value="Enter contact number"/>

At the bottom of the form are two buttons: "Confirm" and "Cancel".

Figure 46: Acceptance test case 04 - evidence 01

The screenshot shows the same "New Branch" form as in Figure 46, but with the following data entered:

Centre Address	City
<input type="text" value="125 ,aluthmawatha, modhra"/>	<input type="text" value="Colombo 15"/>
District	Postal Code
<input type="text" value="colombo"/>	<input type="text" value="01500"/>
Province	Contact Number
<input type="text" value="western province"/>	<input type="text" value="755892040"/>

The "Confirm" and "Cancel" buttons remain at the bottom.

Figure 47: Acceptance test case 04 - evidence 02

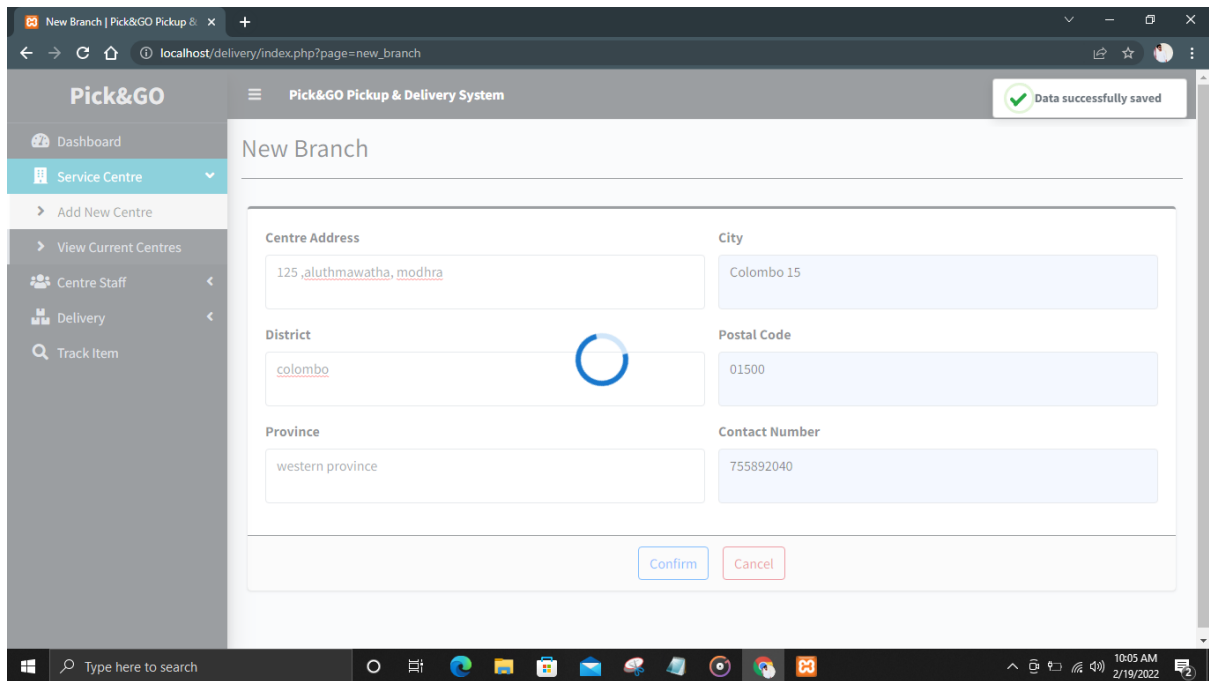


Figure 48: Acceptance test case 04 - evidence 03

05. View, edit, delete service centre branch list

Table 10: Acceptance test case 05

Tester		Sujeevan		
Test Description		View, edit, delete Service Centre branch list		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
5.1	Click the View current Centre button	Should Open the branch list page	Opened the branch list page	PASS
5.2	Click the Add new service Centre button	Should Open the Add new service Centre page	Opened the Add new service Centre page	PASS
5.3	Click the edit button	Should Open the edit branch page	Opened the edit branch page	PASS
5.4	Edit the details and click the Confirm button	Details should update in branch list page	Details updated in branch list page	PASS
5.5	Click the cancel button	Operation should cancel and go back to branch list page	Operation cancelled and went back to branch list page	PASS
5.6	Click the Delete button	Confirmation page should popup	Confirmation page popped up	PASS

5.7	Click the continue button	Should Delete the branch list and “Data successfully deleted” message should popup	Deleted the branch list and “Data successfully deleted” message popped up	PASS
5.8	Click the cancel button	Operation should cancel and go back to branch list page	Operation cancelled and went back to branch list page	PASS
5.9	Type the Centre id in search bar	Only Typed branch list should display	Only Typed branch list displayed	PASS
5.11	Type the wrong Centre id in search bar	No matching records found message should popup	No matching records found message popped up	PASS

Evidence:

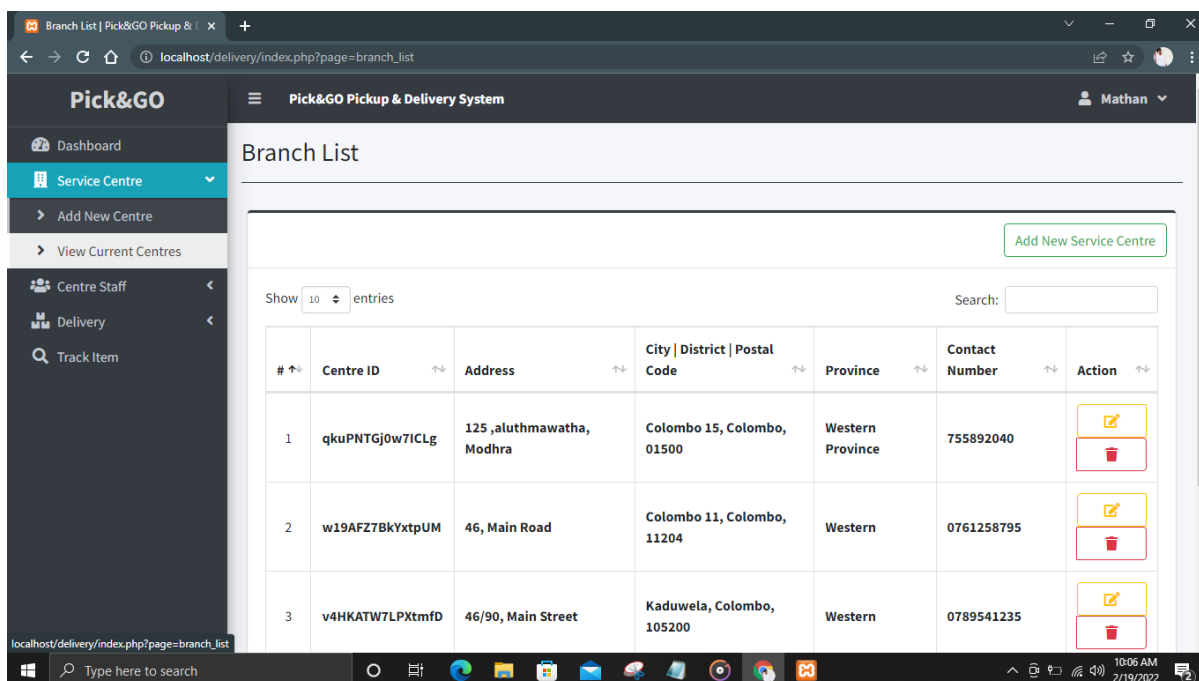


Figure 49: Acceptance test case 05 - evidence 01

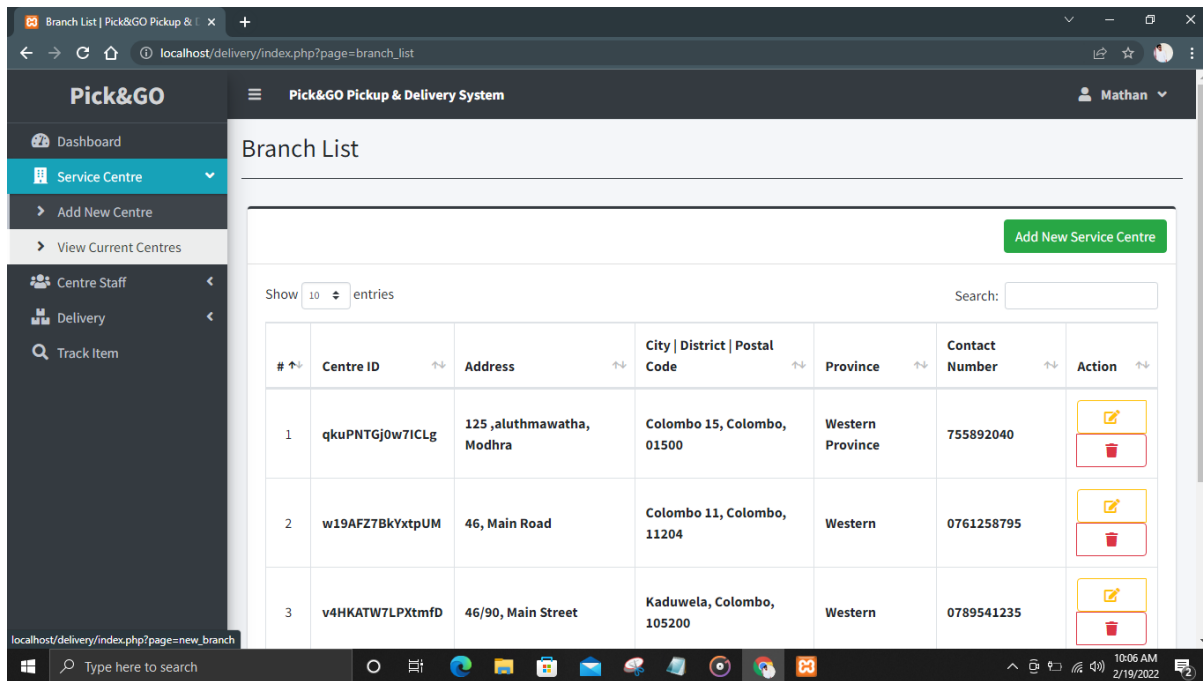


Figure 50: Acceptance test case 05 - evidence 02

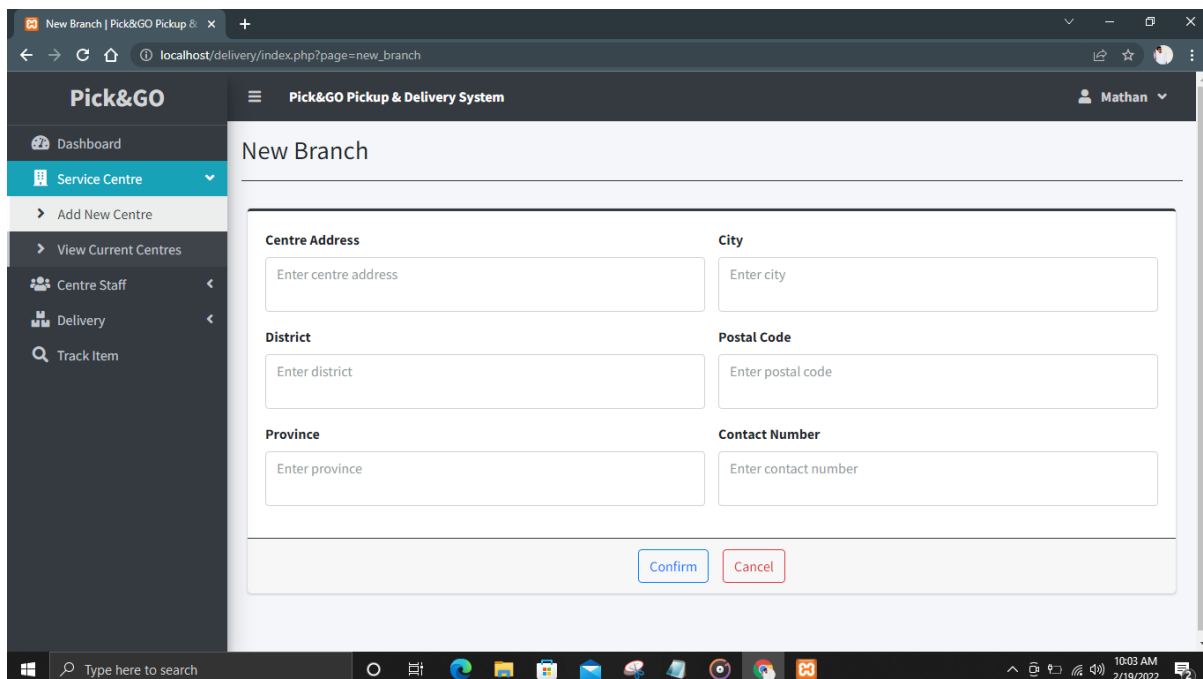


Figure 51: Acceptance test case 05 - evidence 03

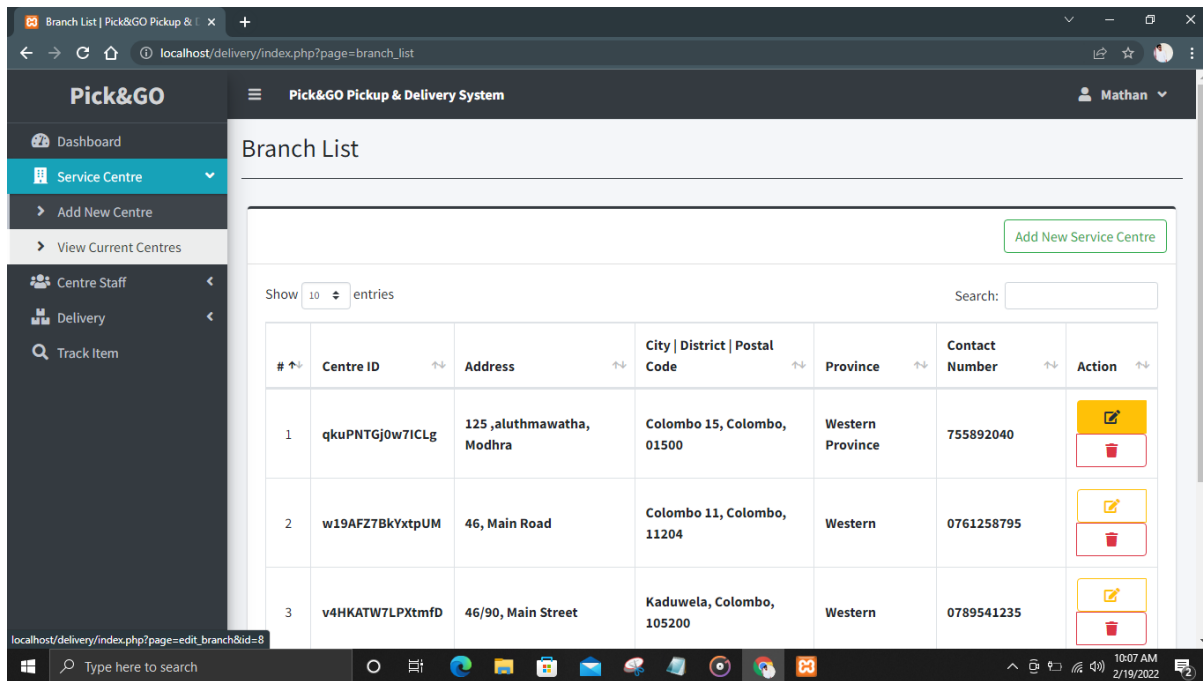


Figure 52: Acceptance test case 05 - evidence 04

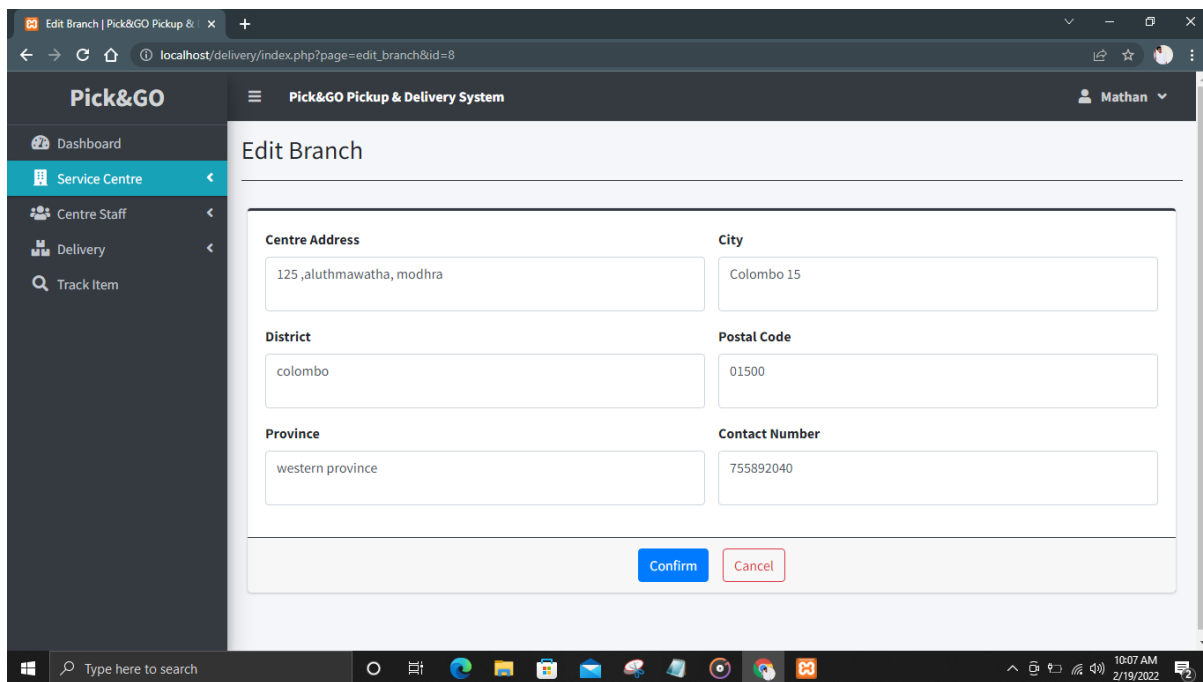


Figure 53: Acceptance test case 05 - evidence 05

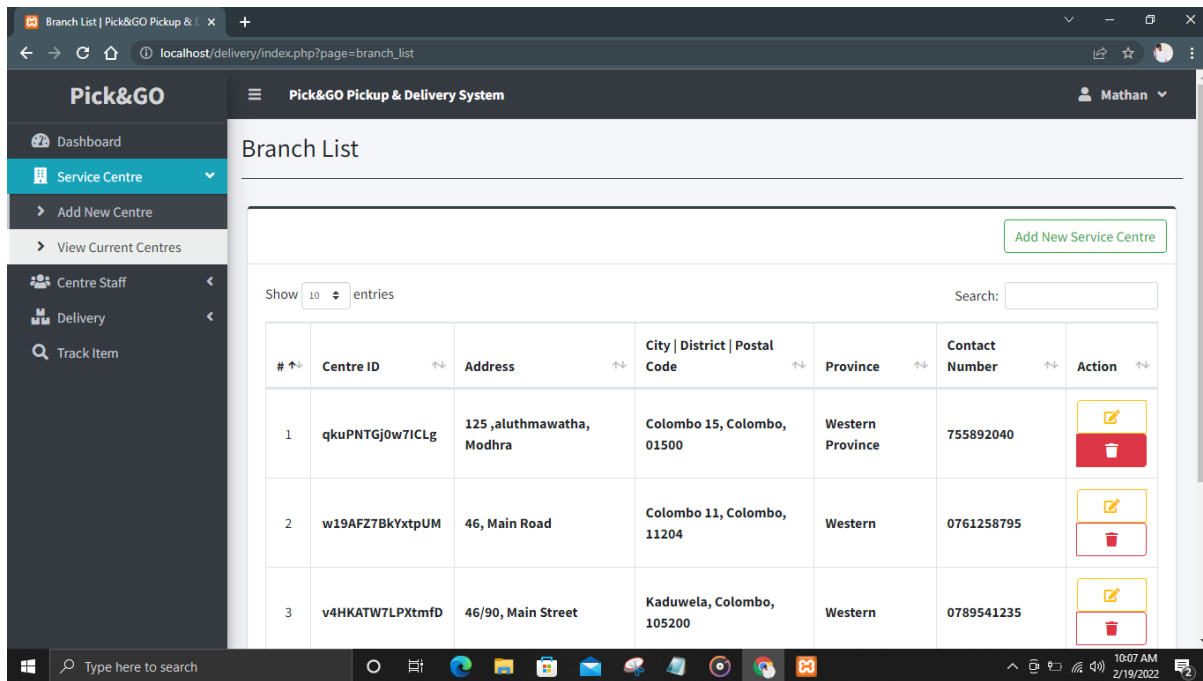


Figure 54: Acceptance test case 05 - evidence 06

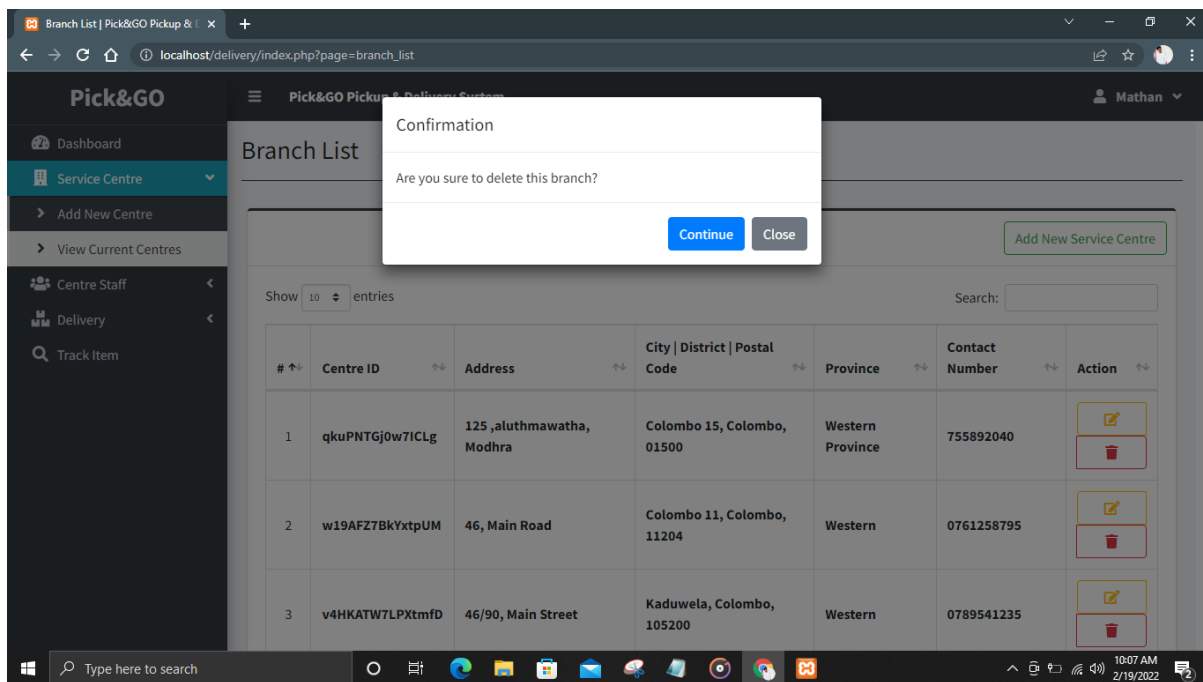


Figure 55: Acceptance test case 05 - evidence 07

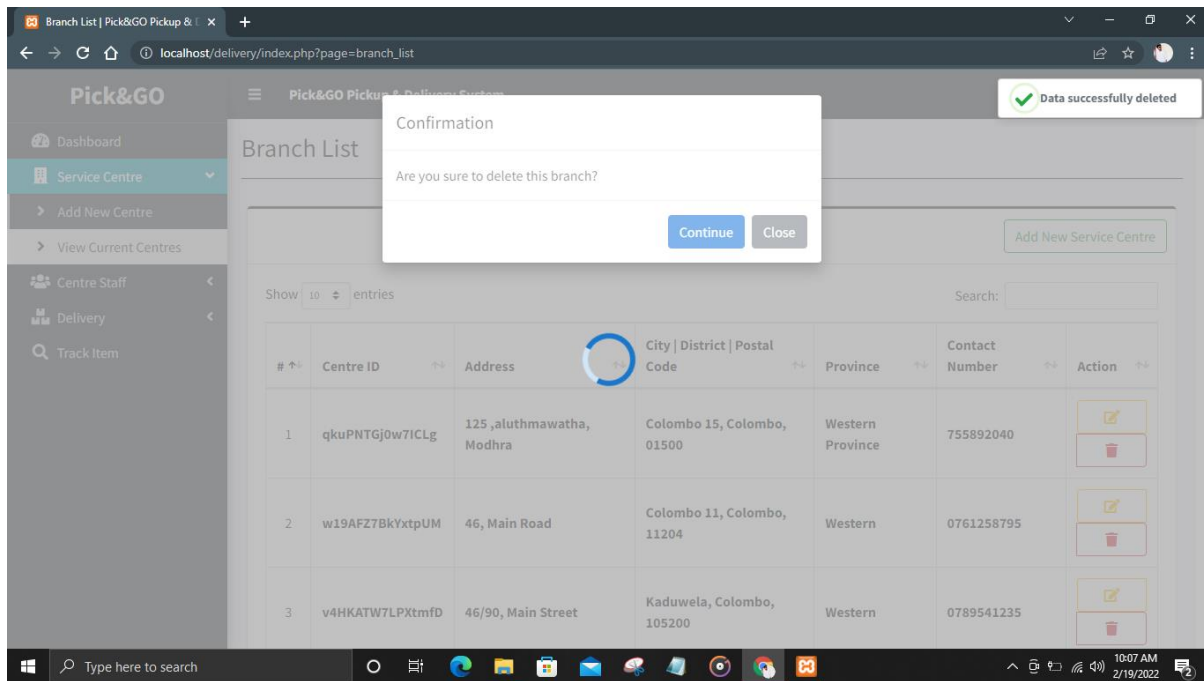


Figure 56: Acceptance test case 05 - evidence 08

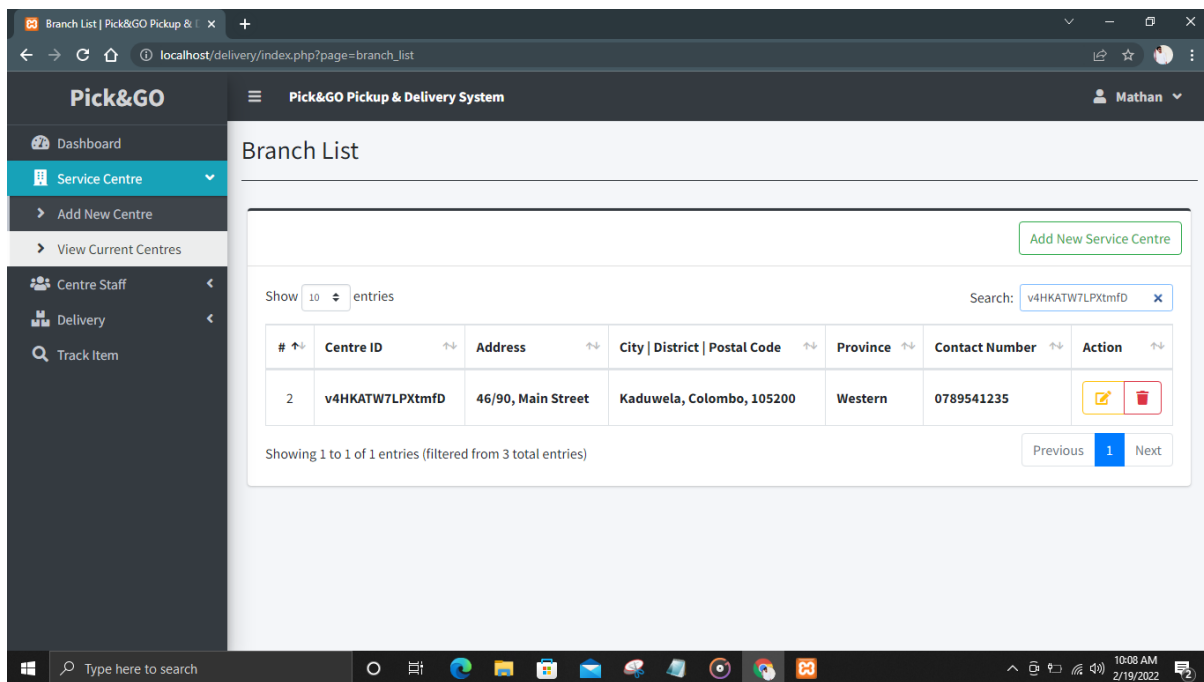


Figure 57: Acceptance test case 05 - evidence 09

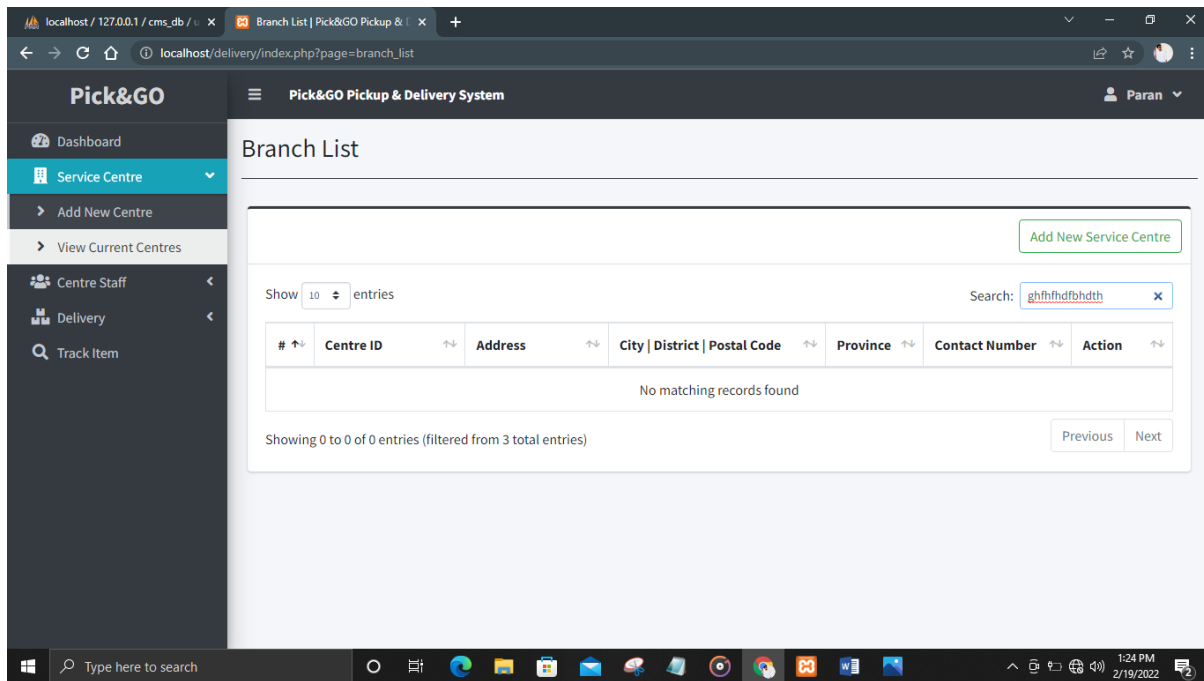


Figure 58: Acceptance test case 05 - evidence 10

06. Add new centre staff.

Table 11: Acceptance test case 06

Tester		Tuan Saad		
Test Description		Add new Staff		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
6.1	Click the add new Staff button	Should Open the add new Staff page	Opened the add new Staff page	PASS
6.2	Fill all details and click confirm button	Data saved successfully message should popup	Data saved successfully message popped up	PASS
6.3	Click the Cancel button	Operation should cancel.	Operation cancelled	PASS

Evidence:

The screenshot shows a web browser window with the URL `localhost/delivery/index.php?page=new_staff`. The page title is "New Staff". On the left is a sidebar menu for "Pick&GO" with options: Dashboard, Service Centre, Centre Staff (selected), Add New Staff, View Current Staff, Delivery, and Track Item. The main content area contains a form with the following fields: "First Name" (placeholder: "Enter first name"), "Last Name" (placeholder: "Enter last name"), "Service Centre Branch" (placeholder: "Please select here"), "Email" (placeholder: "Enter email address"), and "Password" (placeholder: "Create a strong password"). At the bottom of the form are "Confirm" and "Cancel" buttons. The Windows taskbar at the bottom shows the time as 10:08 AM on 2/19/2022.

Figure 59: Acceptance test case 06 - evidence 01

The screenshot shows the same "New Staff" form, but with data entered into the fields. The "First Name" field contains "paran", the "Last Name" field contains "siva", the "Service Centre Branch" dropdown is set to "w19AFZ7BkYtpUM | 46, Main Road, Colombo 11, Colombo, 11204, Western", the "Email" field contains "paran@gmail.com", and the "Password" field contains "****". The "Confirm" and "Cancel" buttons remain at the bottom. The Windows taskbar at the bottom shows the time as 10:09 AM on 2/19/2022.

Figure 60: Acceptance test case 06 - evidence 02

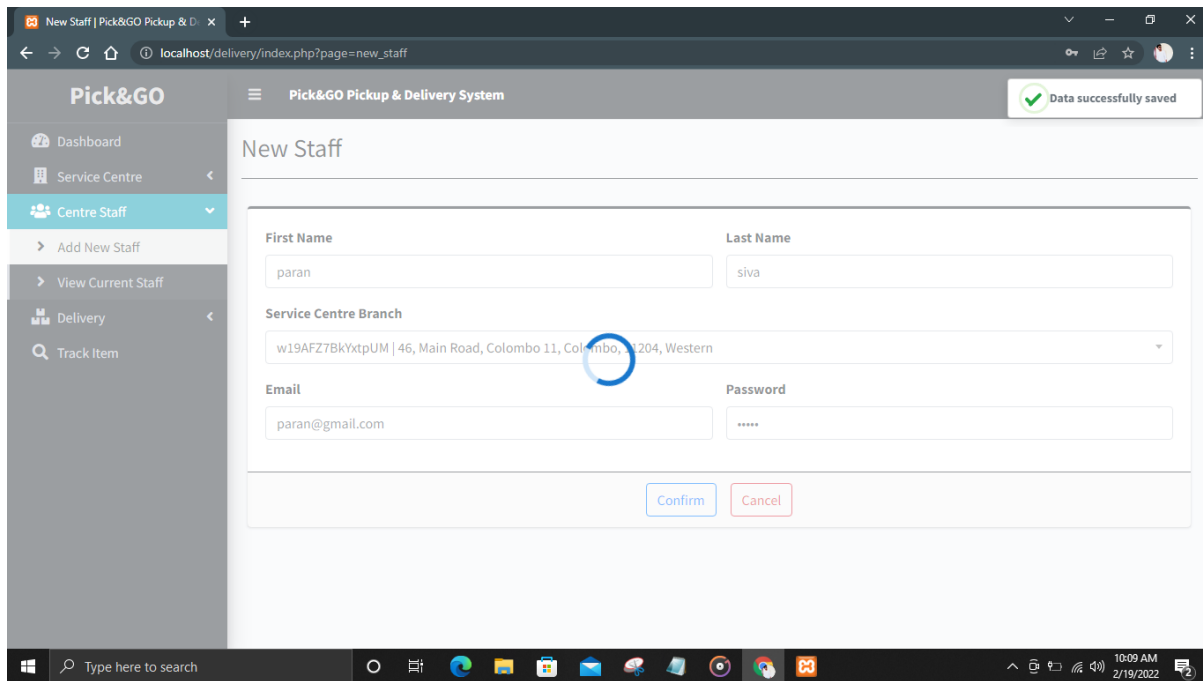


Figure 61: Acceptance test case 06 - evidence 03

07. View, edit and delete staff list.

Table 12: Acceptance test case 07

Tester		Kogul Sager		
Test Description		View, edit and delete staff list		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
7.0	Click the View current Staff button	Should Open the Staff list page	Opened the Staff list page	PASS
7.1	Click the Add new Staff member button	Should Open the Add new Staff page	Opened the Add new Staff page	PASS
7.2	Click the edit button	Should Open the edit Staff page	Opened the edit Staff page	PASS
7.3	Edit the details and click the Confirm button	Details should update in Staff list page	Details updated in Staff list page	PASS
7.4	Click the cancel button	Operation should cancel and go back to Staff list page	Operation cancelled and went back to Staff list page	PASS
7.5	Click the Delete button	Confirmation page should popup	Confirmation page popped up	PASS
7.6	Click the continue button	Should Delete the Staff list and “Data successfully deleted” message should popup	Deleted the Staff list and “Data successfully	PASS

			deleted” message popped up	
7.7	Click the cancel button	Operation should cancel and go back to b Staff list page	Operation cancelled and went back to Staff list page	PASS
7.8	Type the Staff name in search bar	Only Typed staff details should display	Only Typed staff details displayed	PASS
7.9	Type the wrong staff name in search bar	No matching records found message should popup	No matching records found message popped up	PASS

Evidence:

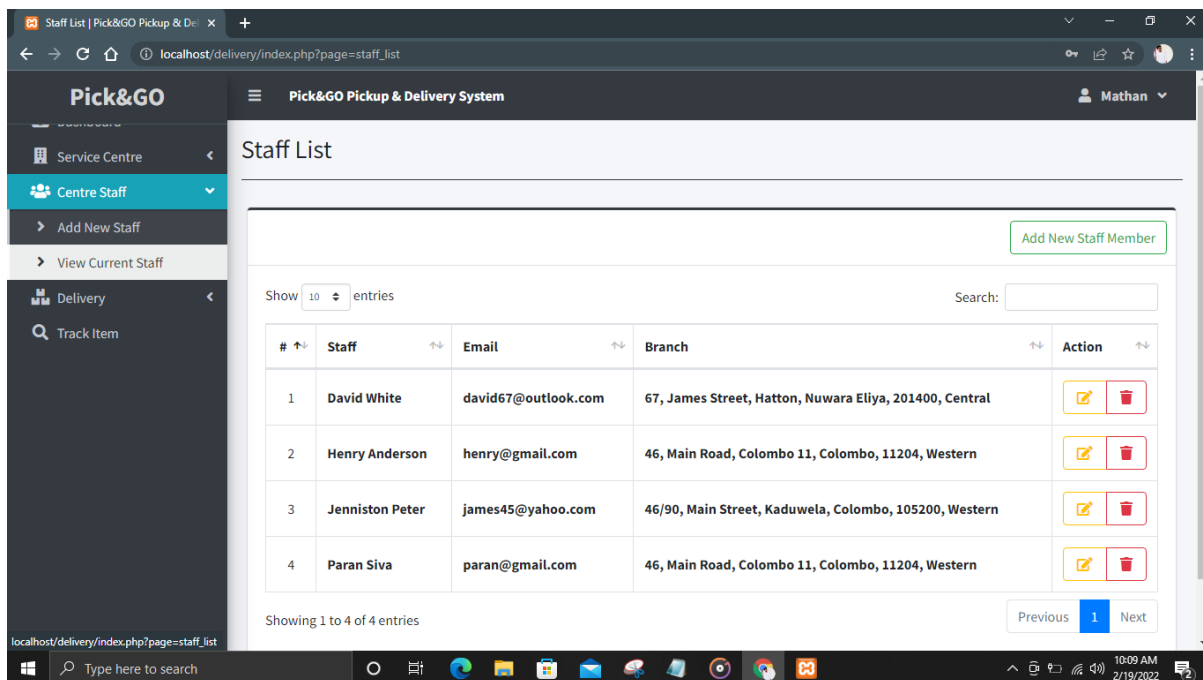


Figure 62: Acceptance test case 07 - evidence 01

Pick&GO | Pick&GO Pickup & Delivery System

Edit Staff

First Name: David

Last Name: White

Service Centre Branch: w8iYXreg5ymf3Ru | 67, James Street, Hatton, Nuwara Eliya, 201400, Central

Email: david67@outlook.com

Password: Create a strong password

Buttons: Confirm, Cancel

Figure 63: Acceptance test case 07 - evidence 02

Pick&GO | Pick&GO Pickup & Delivery System

Staff List

Buttons: Add New Staff Member

Show: 10 entries

Search:

#	Staff	Email	Branch	Action
1	David White	david67@outlook.com	67, James Street, Hatton, Nuwara Eliya, 201400, Central	[Edit] [Delete]
2	Henry Anderson	henry@gmail.com	46, Main Road, Colombo 11, Colombo, 11204, Western	[Edit] [Delete]
3	Jenniston Peter	james45@yahoo.com	46/90, Main Street, Kaduwela, Colombo, 105200, Western	[Edit] [Delete]
4	Paran Siva	paran@gmail.com	46, Main Road, Colombo 11, Colombo, 11204, Western	[Edit] [Delete]

Showing 1 to 4 of 4 entries

Buttons: Previous, 1, Next

Figure 64: Acceptance test case 07 - evidence 03

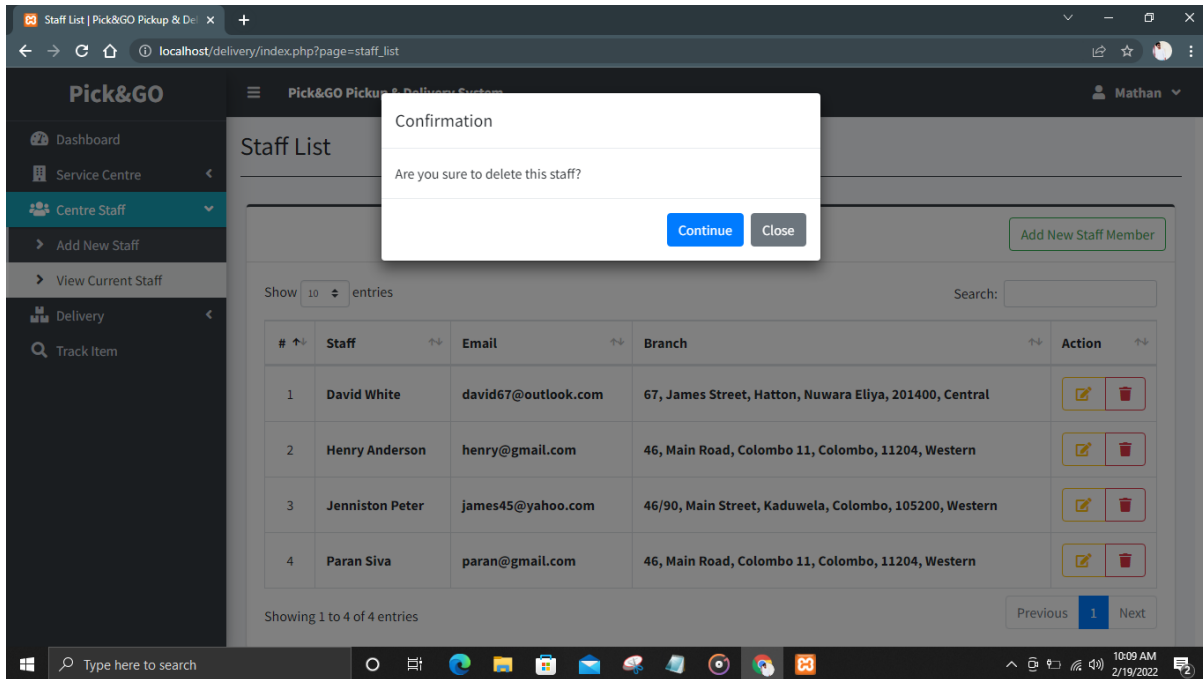


Figure 65: Acceptance test case 07 - evidence 04

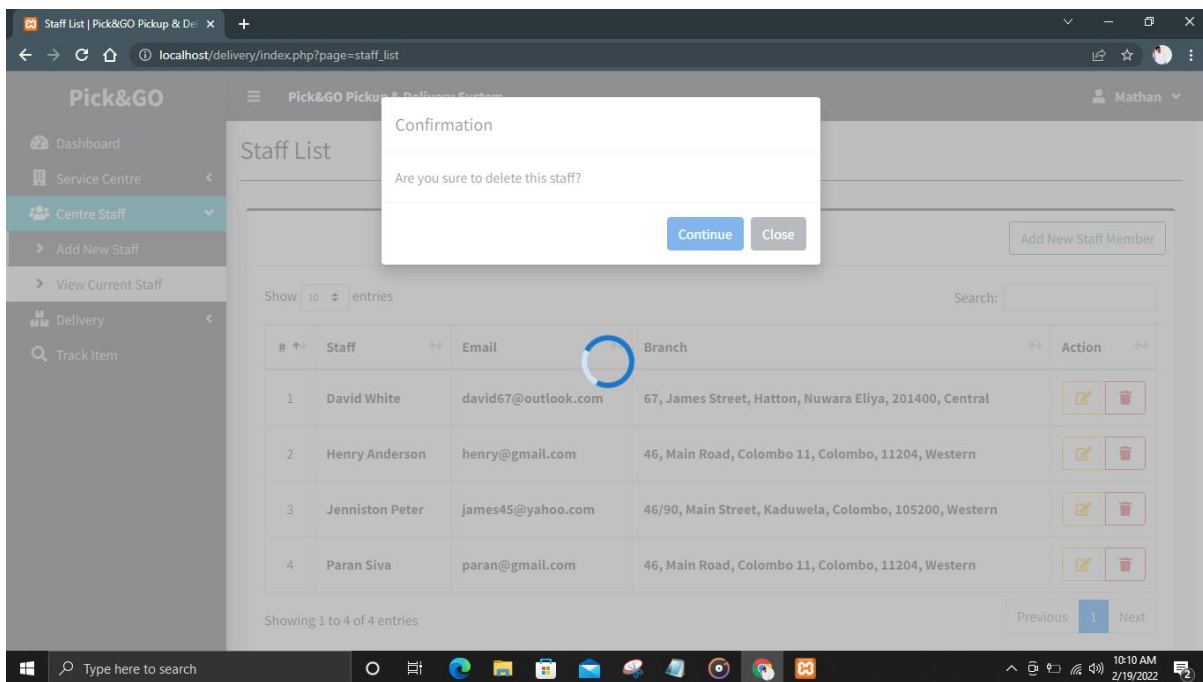


Figure 66: Acceptance test case 07 - evidence 05

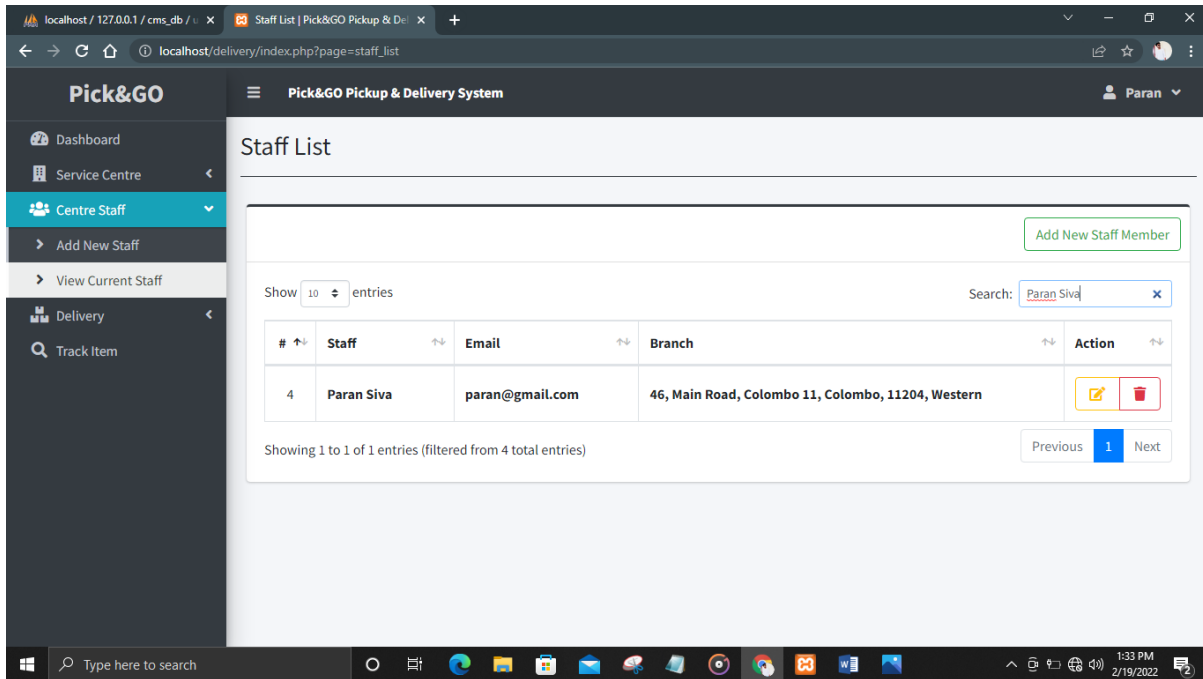


Figure 67: Acceptance test case 07 - evidence 06

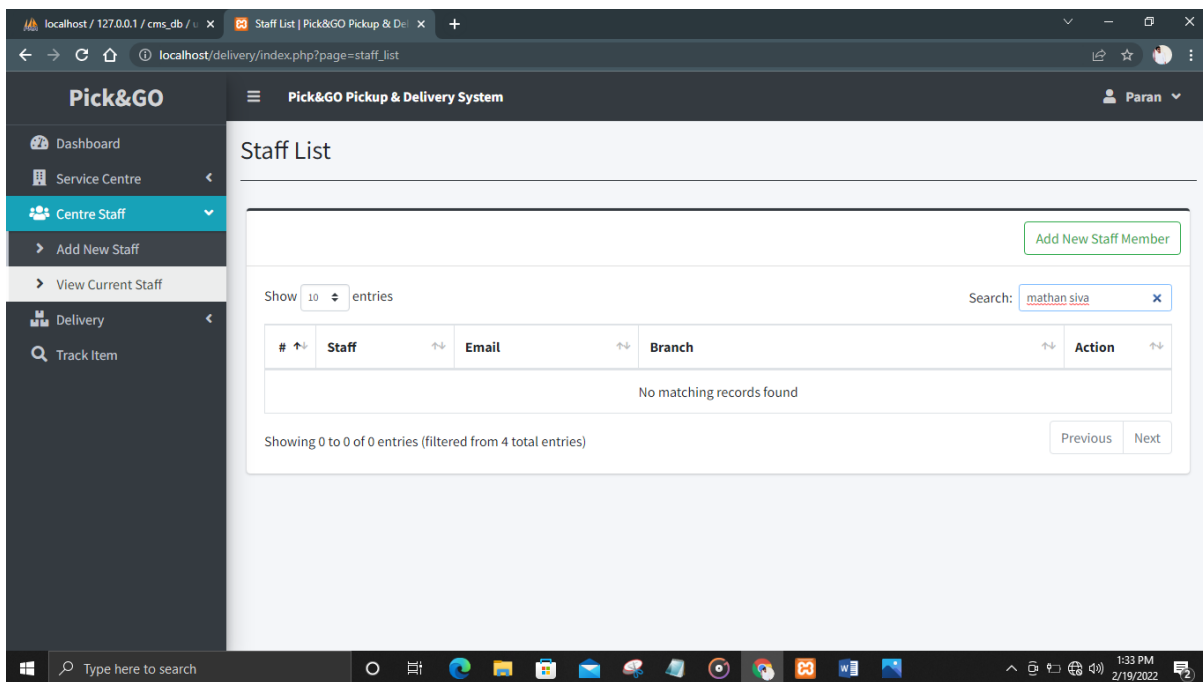


Figure 68: Acceptance test case 07 - evidence 07

08. Add new pickup.

Table 13: Acceptance test case 08

Tester		Sujeevan		
Test Description		Add new pickup		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
8.1	Click the add new pickup button	Should Open the add new parcel page	Opened the add new parcel page	PASS
8.2	Fill all details and click confirm button	Data saved successfully message should popup	Data saved successfully message popped up	PASS
8.3	Click the Cancel button	Operation should cancel.	Operation cancelled	PASS

Evidence:

The screenshot shows the 'New Parcel' form in the Pick&GO system. The form is divided into two main sections: 'Sender Information' and 'Receiver Information'. Each section contains fields for 'Full Name', 'Address', and 'Contact Number'. Below these fields, there is a 'Type' dropdown menu set to 'Pickup' and a 'Current Service Centre' dropdown menu. The 'Type' dropdown has a tooltip that reads: 'Deliver = Deliver to Recipient Address , Pickup = Pickup to nearest Branch'. The 'Current Service Centre' dropdown has a placeholder text 'Please select here'. The 'Nearest Pickup Branch' dropdown is also visible below it.

Sender Information		Receiver Information	
Full Name	Enter sender full name	Full Name	Enter receiver full name
Address	Enter sender address	Address	Enter receiver address
Contact Number	Enter sender contact number	Contact Number	Enter receiver contact number
Type	Pickup	Current Service Centre	Please select here
Branch		Nearest Pickup Branch	Please select here

Figure 69: Acceptance test case 08 - evidence 01

The screenshot shows the 'New Parcel' form in the Pick&GO system, focusing on the 'Item Details' section. The 'Type' dropdown is still set to 'Pickup'. The 'Current Service Centre' dropdown is now populated with the value 'w19AFZ7BkYtpUM | 46, Main Road, Colombo 11, Colombo, 11204,...'. The 'Nearest Pickup Branch' dropdown is also populated with the value 'v4HKATW7LPxtmFD | 46/90, Main Street, Kaduwela, Colombo, 105...'. Below these, the 'Item Details' table is visible, with columns for Weight (KG), Height (CM), Length (CM), Width (CM), and Cost (Rs.). The table contains one row of data: Weight (2), Height (15), Length (2), Width (5), and Cost (1,500). Below the table, the 'Overall Cost (Rs.)' is displayed as 1,500.00. At the bottom of the form, there are 'Confirm' and 'Cancel' buttons.

Weight (KG)	Height (CM)	Length (CM)	Width (CM)	Cost (Rs.)
2	15	2	5	1,500
Overall Cost (Rs.)				1,500.00

Confirm Cancel

Figure 70: Acceptance test case 08 - evidence 02

localhost / 127.0.0.1 / cms_db / ... x New Parcel | Pick&GO Pickup & Delivery System

localhost/delivery/index.php?page=new_parcel

Pick&GO Pick&GO Pickup & Delivery System Data successfully saved

Dashboard
Service Centre
Centre Staff
Delivery
Add New Pickup
View Available Items
Track Item

Type Pickup Deliver = Deliver to Recipient Address , Pickup = Pickup to nearest

Current Service Centre
Branch w19AFZ7BKypUM | 46, Main Road, Colombo 11, Colombo, 11204,...

Nearest Pickup Branch
v4HKATW7LPXtmfD | 46/90, Main Street, Kaduwela, Colombo, 105...

Item Details

Weight (KG)	Height (CM)	Length (CM)	Width (CM)	Cost (Rs.)
2	15	2	5	1,500
Overall Cost (Rs.)				1,500.00

Confirm Cancel

10:30 AM 2/19/2022

Figure 71: Acceptance test case 08 - evidence 03

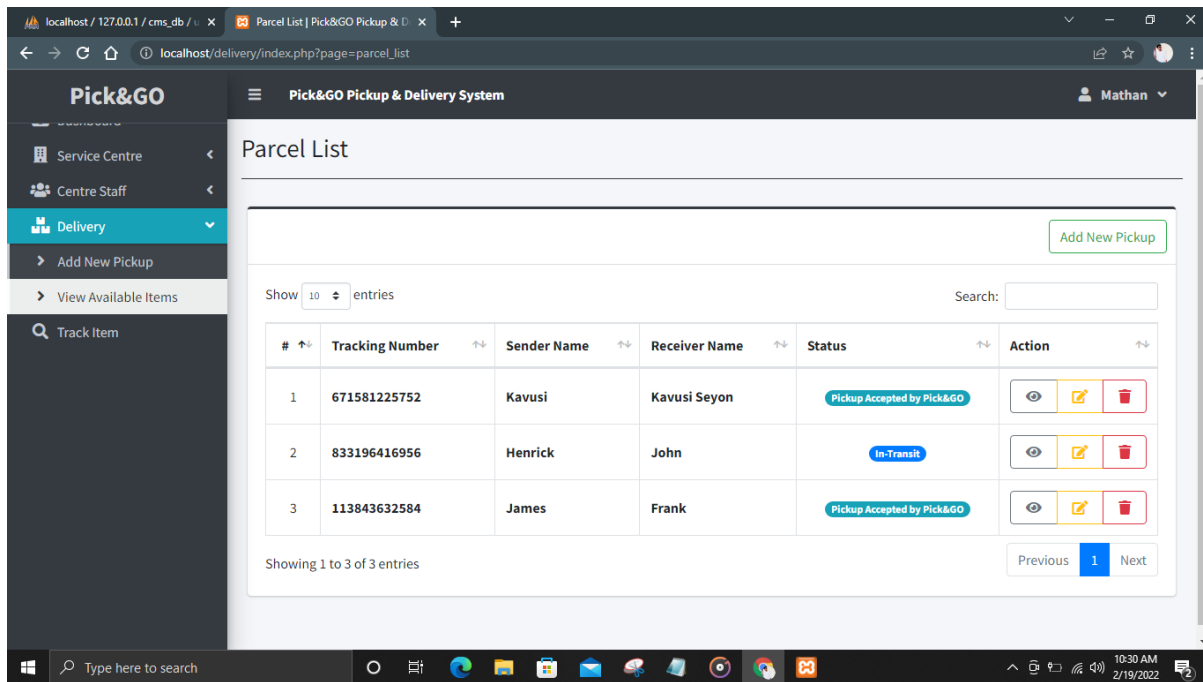
09. View, edit and delete parcel records.

Table 14: Acceptance test case 09

Tester		Tuan Saad		
Test Description		View, edit and delete parcel records.		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
9.0	Click the View available items button	Should Open the parcel list page	Opened the parcel list page	PASS
9.1	Click the Add new pickup button	Should Open the Add new Parcel page	Opened the Add new Parcel page	PASS
9.2	Click the review button	Should Open Parcel details page	Opened the Parcel details page	PASS
9.3	Click the update statues button	Should Open update statues page	Opened the update statues page	PASS
9.4	Select the statues and click update button	statues should update	statues updated successfully	PASS
9.5	Click the close button	Operation should cancel and go back to parcel details page	Operation cancelled and went back to parcel details page	PASS
9.6	Click the edit button	Should Open the edit parcel page	Opened the edit parcel page	PASS

9.7	Edit the details and click the Confirm button	Details should update in parcel list page	Details updated in parcel list page	PASS
9.8	Click the cancel button	Operation should cancel and go back to parcel list page	Operation cancelled and went back to parcel list page	PASS
9.9	Click the Delete button	Confirmation page should popup	Confirmation page popped up	PASS
9.11	Click the continue button	Should Delete the parcel list and “Data successfully deleted” message should popup	Deleted the parcel list and “Data successfully deleted” message popped up	PASS
9.12	Click the cancel button	Operation should cancel and go back to parcel list page	Operation cancelled and went back to parcel list page	
9.13	Type the tracking number in search bar	Only Typed tracking number item details should display	Only Typed tracking number item details displayed	PASS
9.14	Type the wrong tracking number in search bar	No matching records found message should popup	No matching records found message popped up	PASS

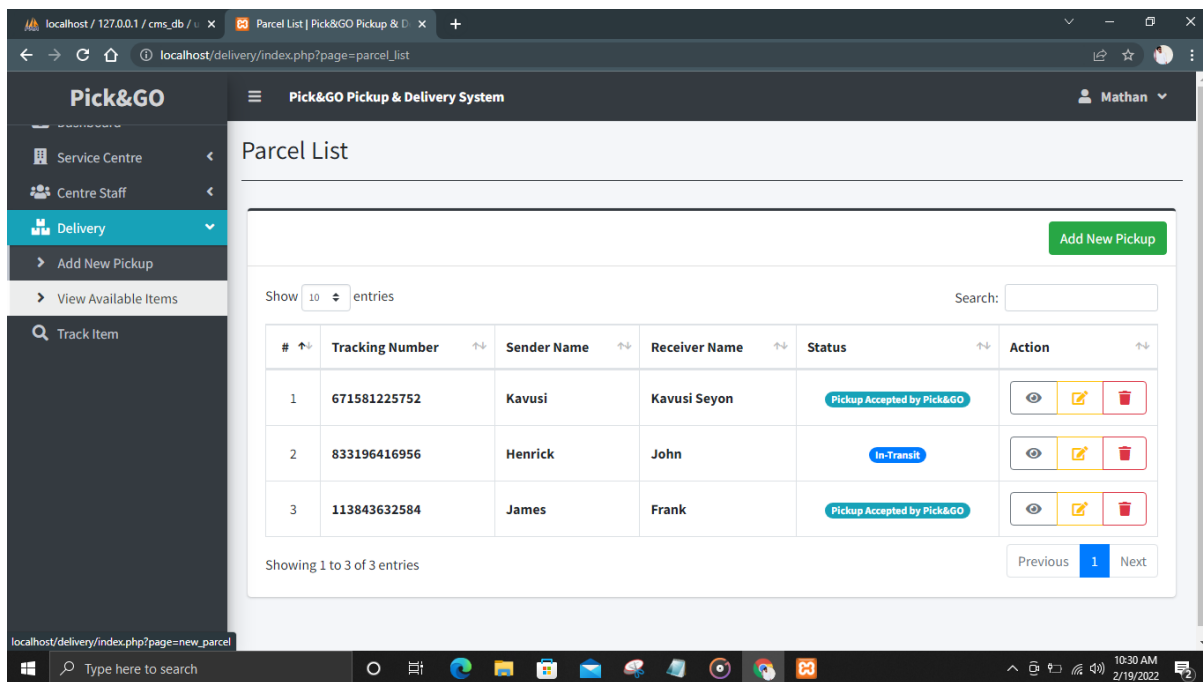
Evidence:



The screenshot shows the 'Parcel List' page of the 'Pick&GO Pickup & Delivery System'. The left sidebar contains navigation links: 'Service Centre', 'Centre Staff', 'Delivery' (selected), 'Add New Pickup', 'View Available Items', and 'Track Item'. The main content area displays a table with three entries. The table has columns for '#', 'Tracking Number', 'Sender Name', 'Receiver Name', 'Status', and 'Action'. The 'Status' column contains labels like 'Pickup Accepted by Pick&GO' and 'In-Transit'. The 'Action' column contains icons for view, edit, and delete. A search bar and a 'Show 10 entries' dropdown are at the top of the table. A 'Previous 1 Next' pagination control is at the bottom of the table.

#	Tracking Number	Sender Name	Receiver Name	Status	Action
1	671581225752	Kavusi	Kavusi Seyon	Pickup Accepted by Pick&GO	
2	833196416956	Henrick	John	In-Transit	
3	113843632584	James	Frank	Pickup Accepted by Pick&GO	

Figure 72: Acceptance test case 09 - evidence 01



This screenshot is identical to Figure 72, showing the 'Parcel List' page of the 'Pick&GO Pickup & Delivery System'. It displays a table with three entries, each with a tracking number, sender name, receiver name, status, and action icons. The interface includes a sidebar with navigation options and a search bar at the top of the table.

#	Tracking Number	Sender Name	Receiver Name	Status	Action
1	671581225752	Kavusi	Kavusi Seyon	Pickup Accepted by Pick&GO	
2	833196416956	Henrick	John	In-Transit	
3	113843632584	James	Frank	Pickup Accepted by Pick&GO	

Figure 73: Acceptance test case 09 - evidence 02

Pick&GO | Pick&GO Pickup & Delivery System

New Parcel

Sender Information

Full Name
Enter sender full name

Address
Enter sender address

Contact Number
Enter sender contact number

Receiver Information

Full Name
Enter receiver full name

Address
Enter receiver address

Contact Number
Enter receiver contact number

Type Pickup Deliver = Deliver to Recipient Address, Pickup = Pickup to nearest Branch

Current Service Centre
Please select here

Nearest Pickup Branch
Please select here

Figure 74: Acceptance test case 09 - evidence 03

Pick&GO | Pick&GO Pickup & Delivery System

Parcel List

Add New Pickup

Show 10 entries Search:

#	Tracking Number	Sender Name	Receiver Name	Status	Action
1	671581225752	Kavusi	Kavusi Seyon	Pickup Accepted by Pick&GO	
2	833196416956	Henrick	John	In-Transit	
3	113843632584	James	Frank	Pickup Accepted by Pick&GO	

Showing 1 to 3 of 3 entries

Previous 1 Next

Figure 75: Acceptance test case 09 - evidence 04

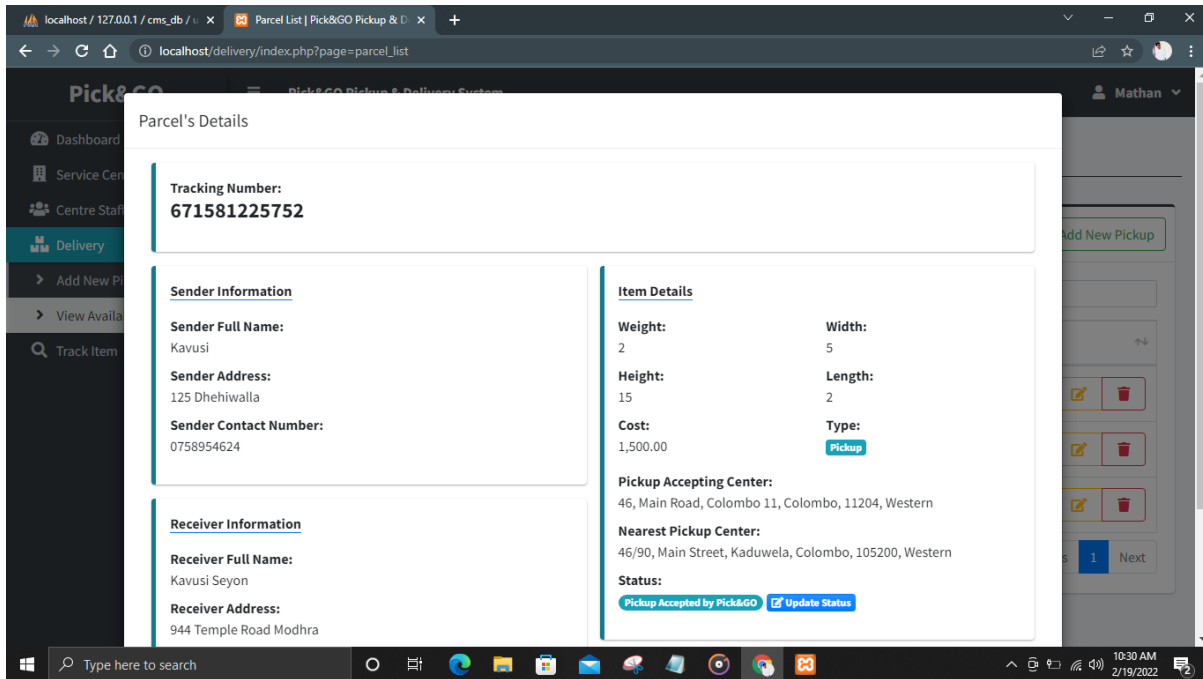


Figure 76: Acceptance test case 09 - evidence 05

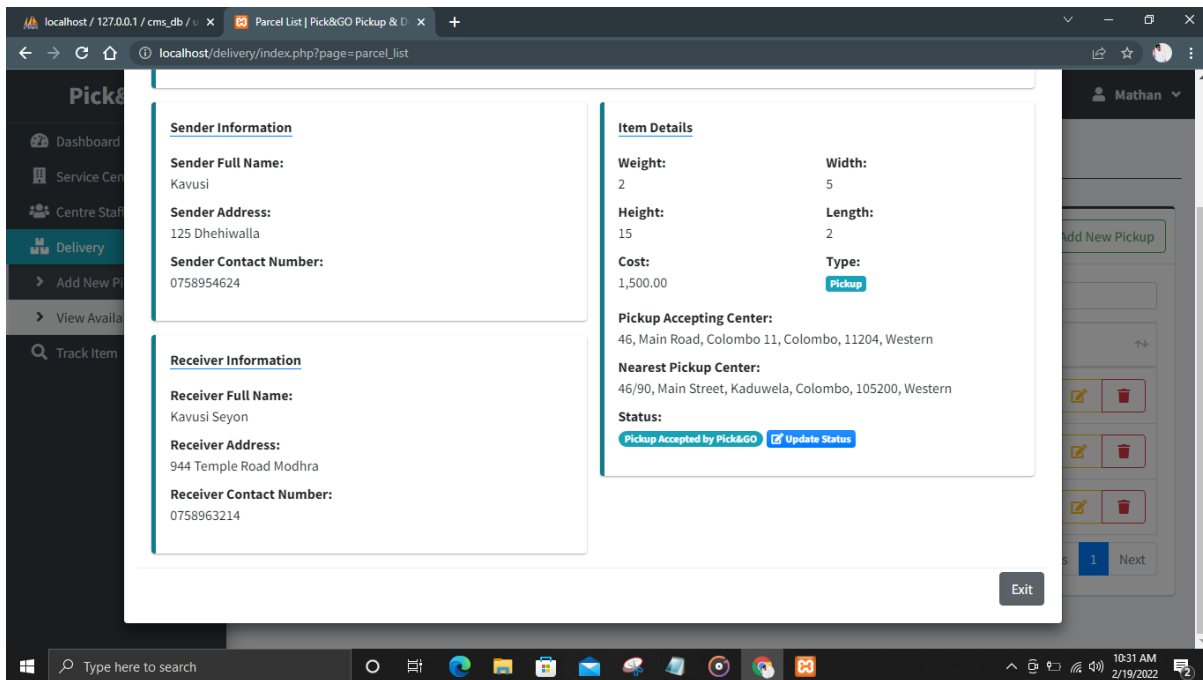


Figure 77: Acceptance test case 09 - evidence 06

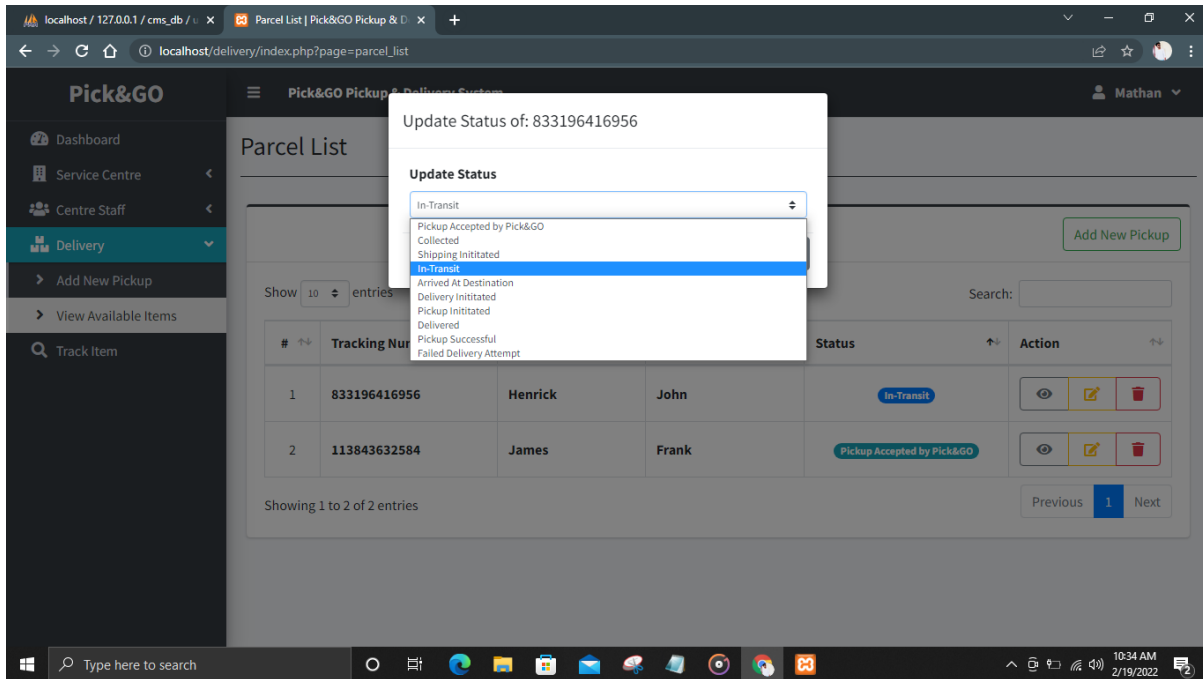


Figure 78: Acceptance test case 09 - evidence 07

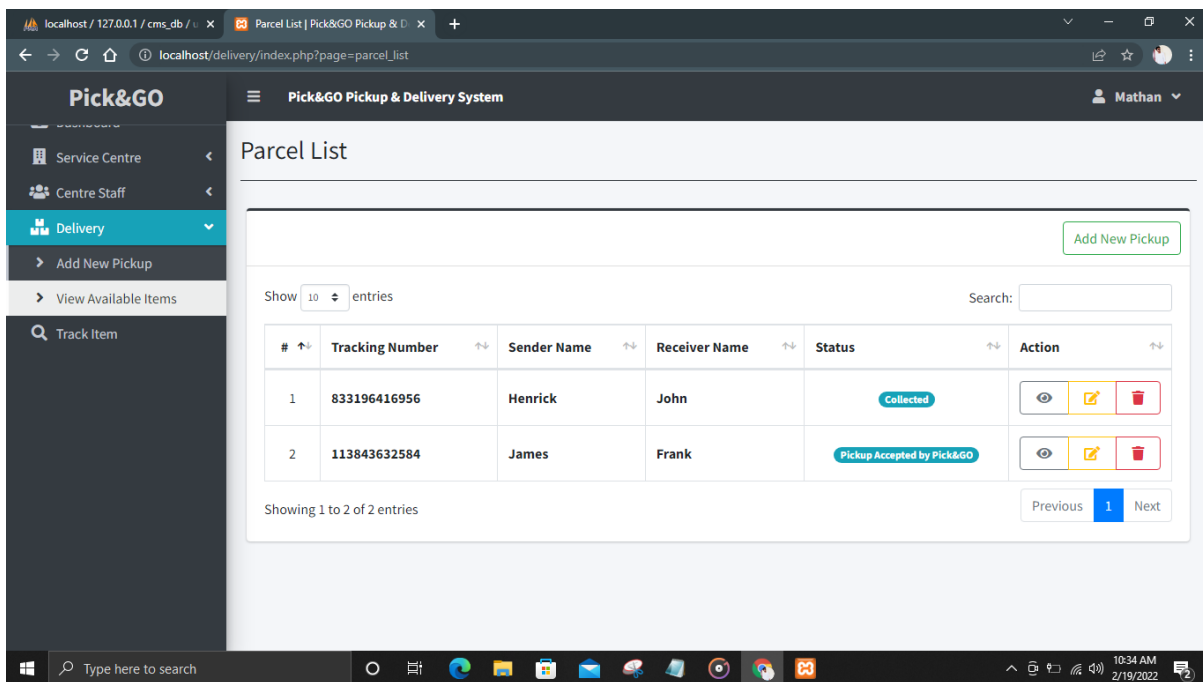


Figure 79: Acceptance test case 09 - evidence 08

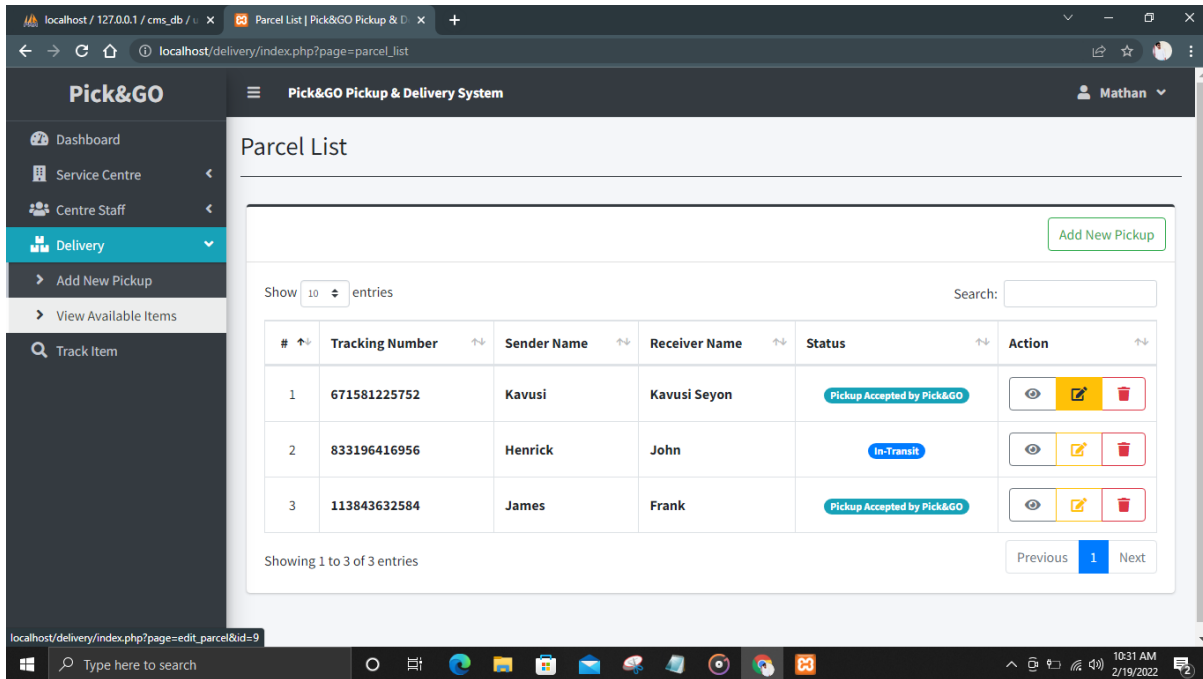


Figure 80: Acceptance test case 09 - evidence 09

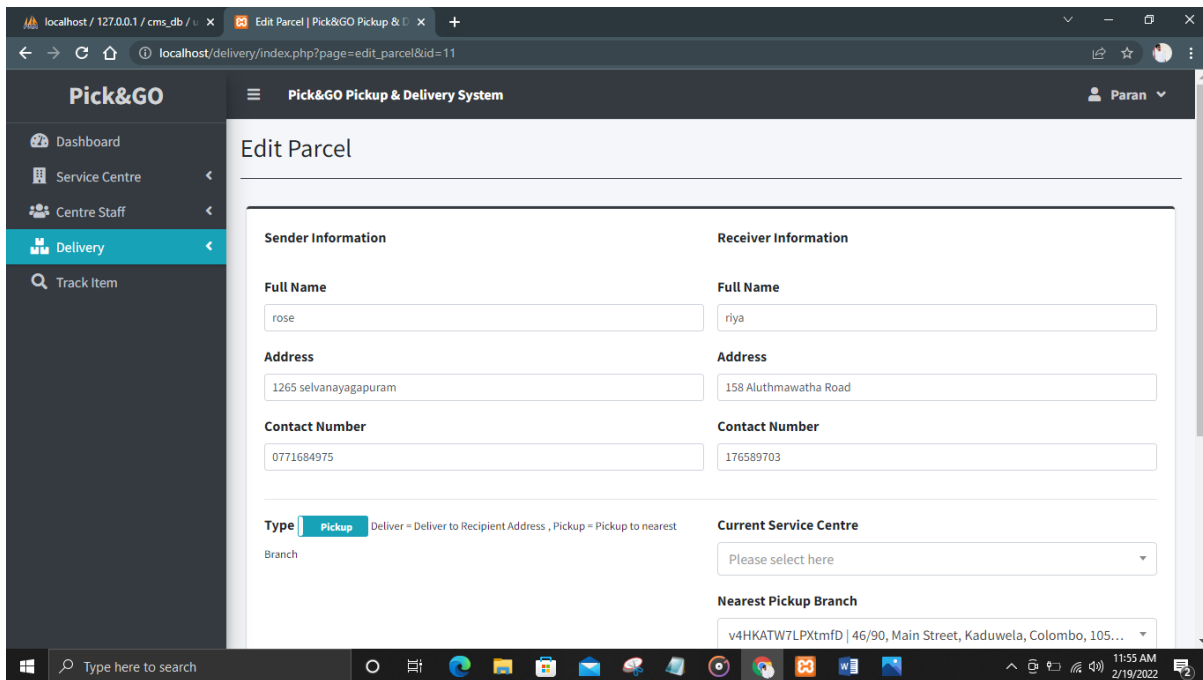


Figure 81: Acceptance test case 09 - evidence 10

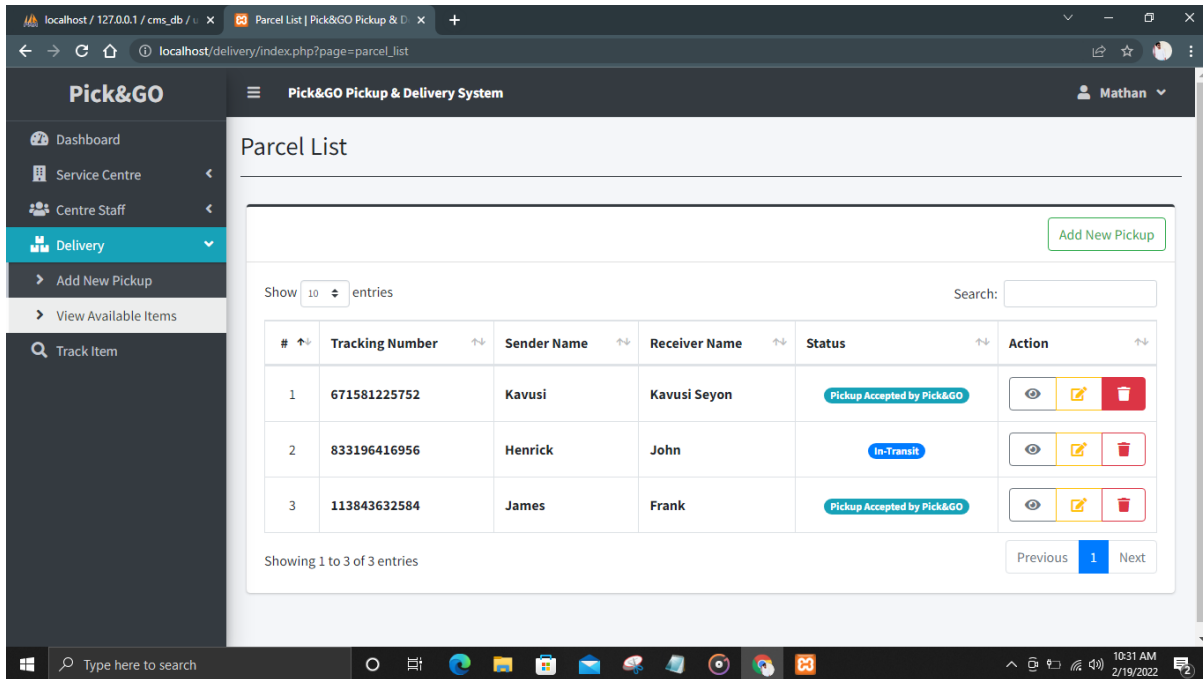


Figure 82: Acceptance test case 09 - evidence 11

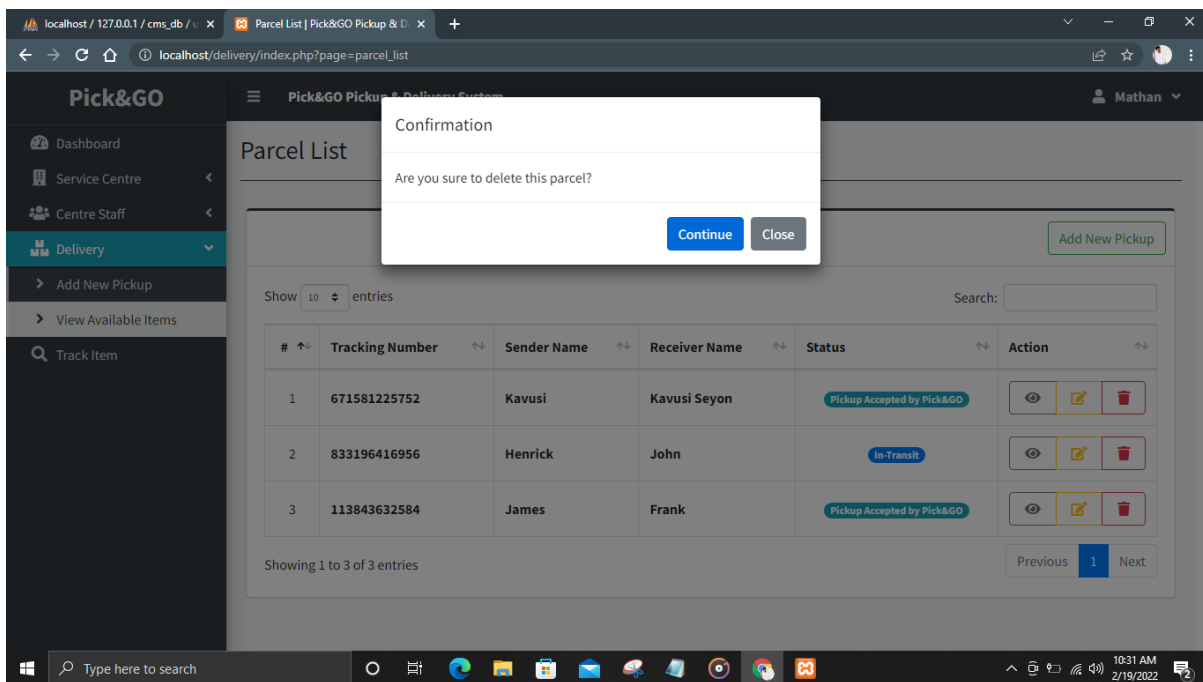


Figure 83: Acceptance test case 09 - evidence 12

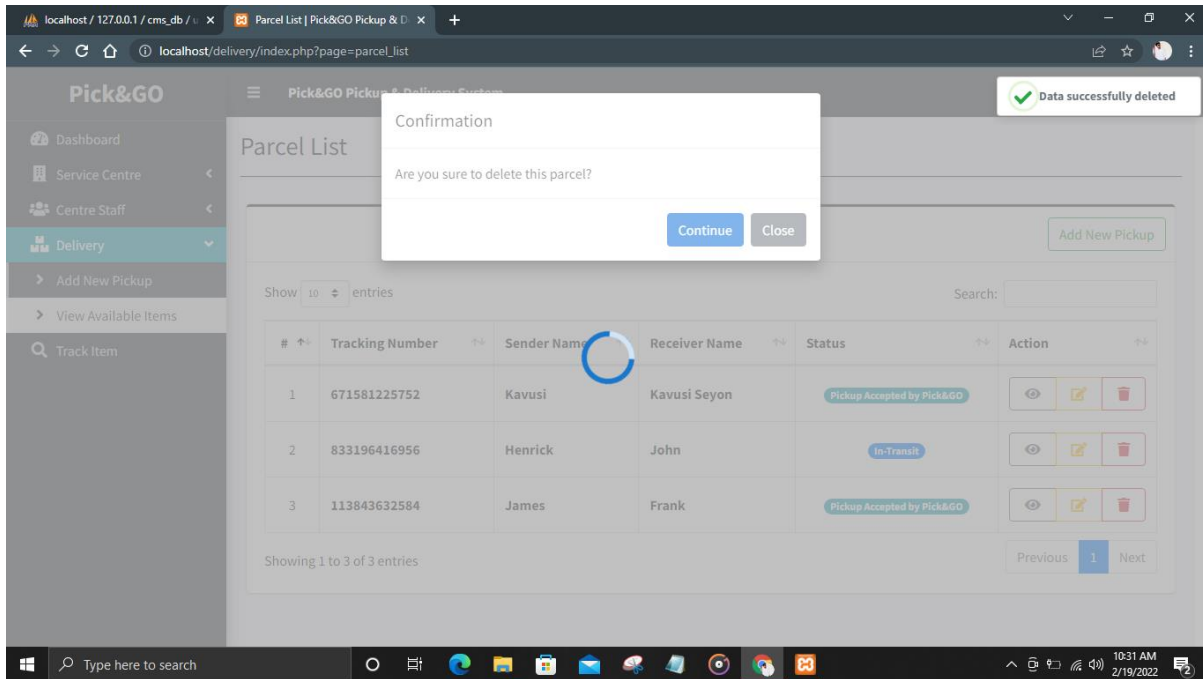


Figure 84: Acceptance test case 09 - evidence 13

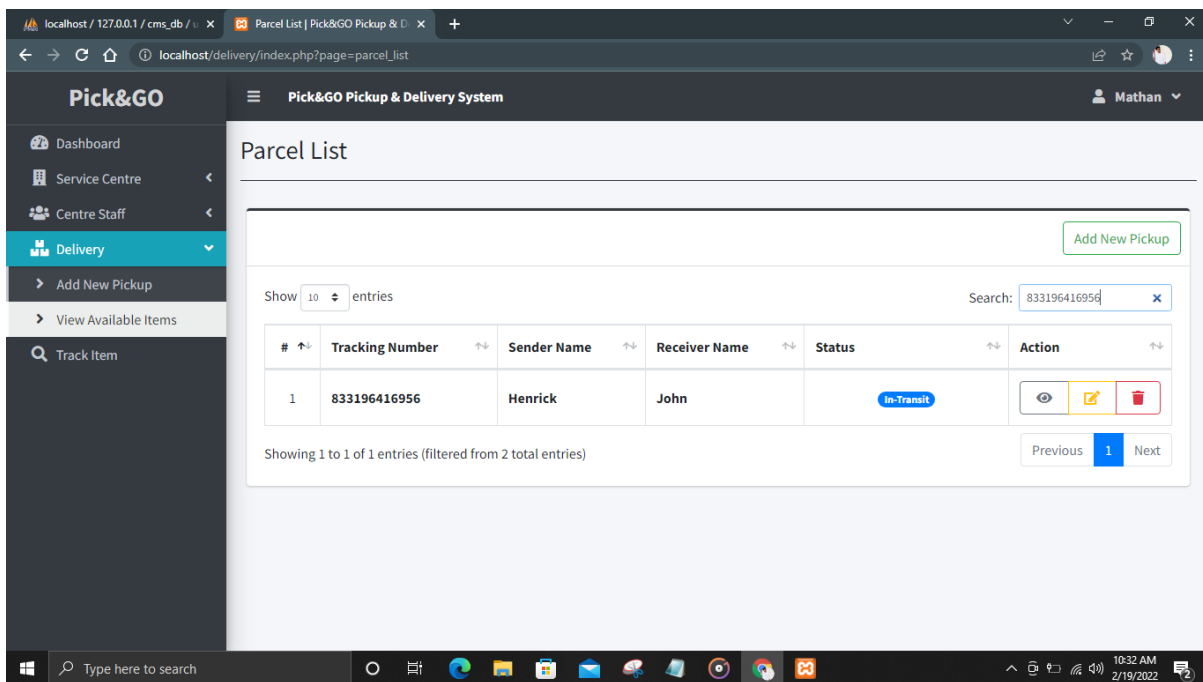


Figure 85: Acceptance test case 09 - evidence 14

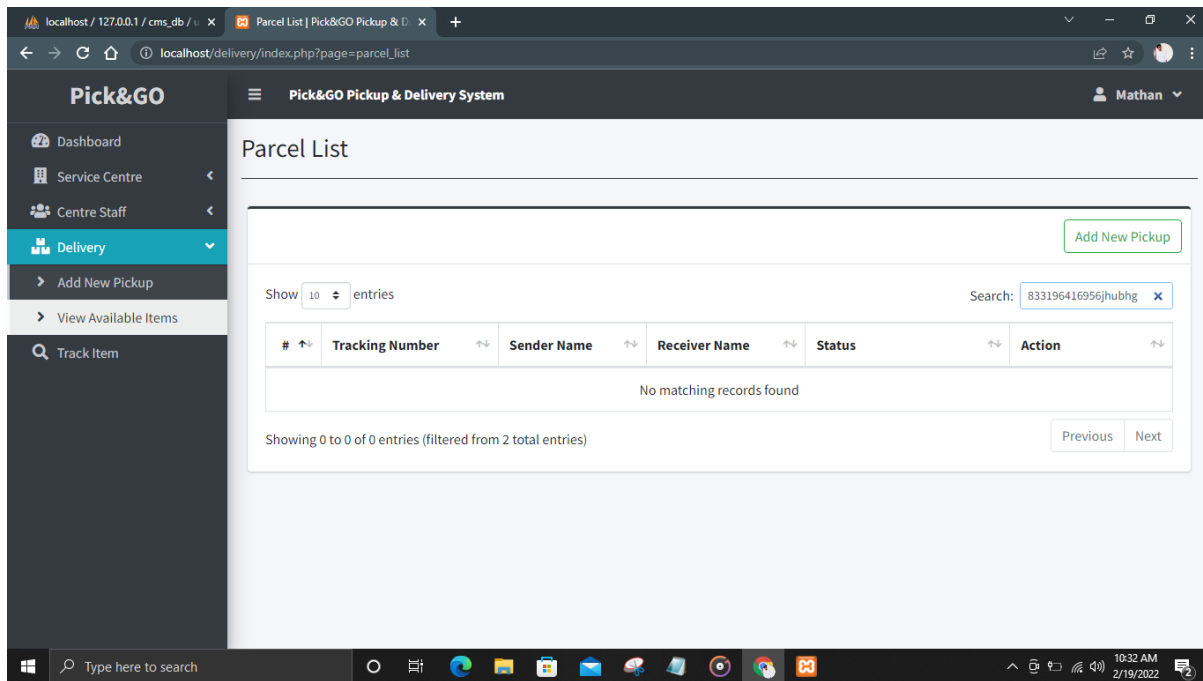


Figure 86: Acceptance test case 09 - evidence 15

10. Tracking deliveries.

Table 15: Acceptance test case 10

Tester		Mathan		
Test Description		Tracking page		
Test Case	Input Data	Expected Outcome	Actual Outcome	Outcome Result (PASS/FAIL)
10.1	Enter tracking number	Tracking details and statues should display	Tracking details and statues displayed	PASS
10.2	Enter wrong tracking number	Unknown tracking number message should popup	Unknown tracking number message popped up	PASS

Evidence:

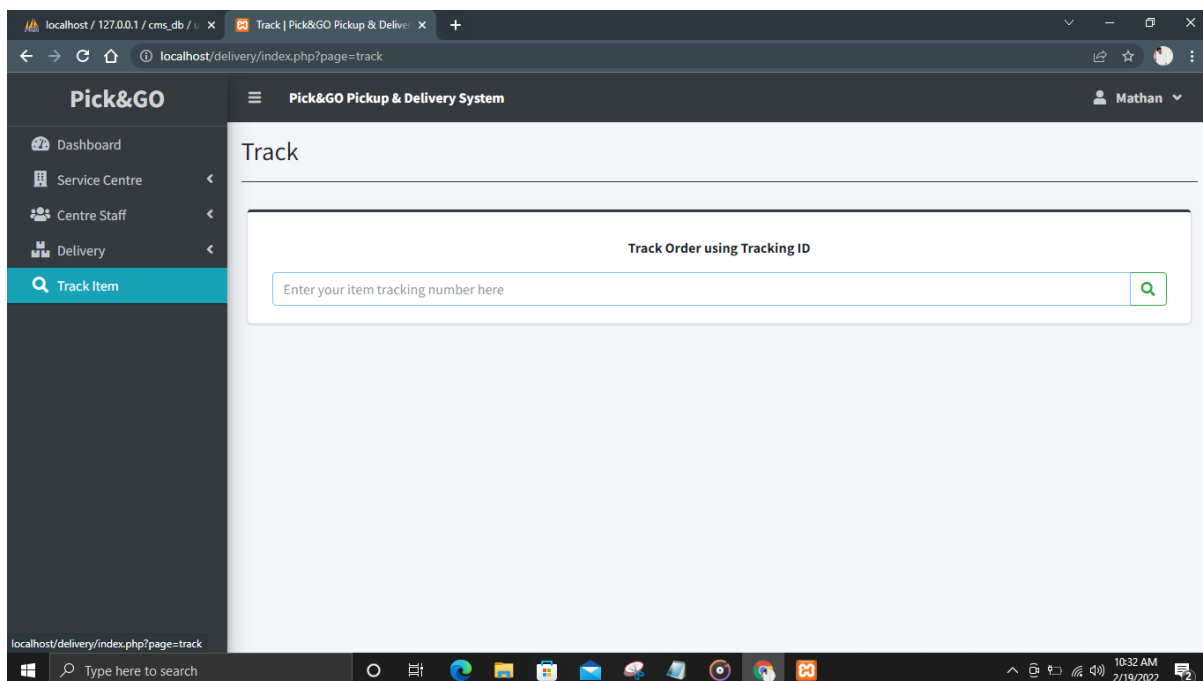


Figure 87: Acceptance test case 10 - evidence 01

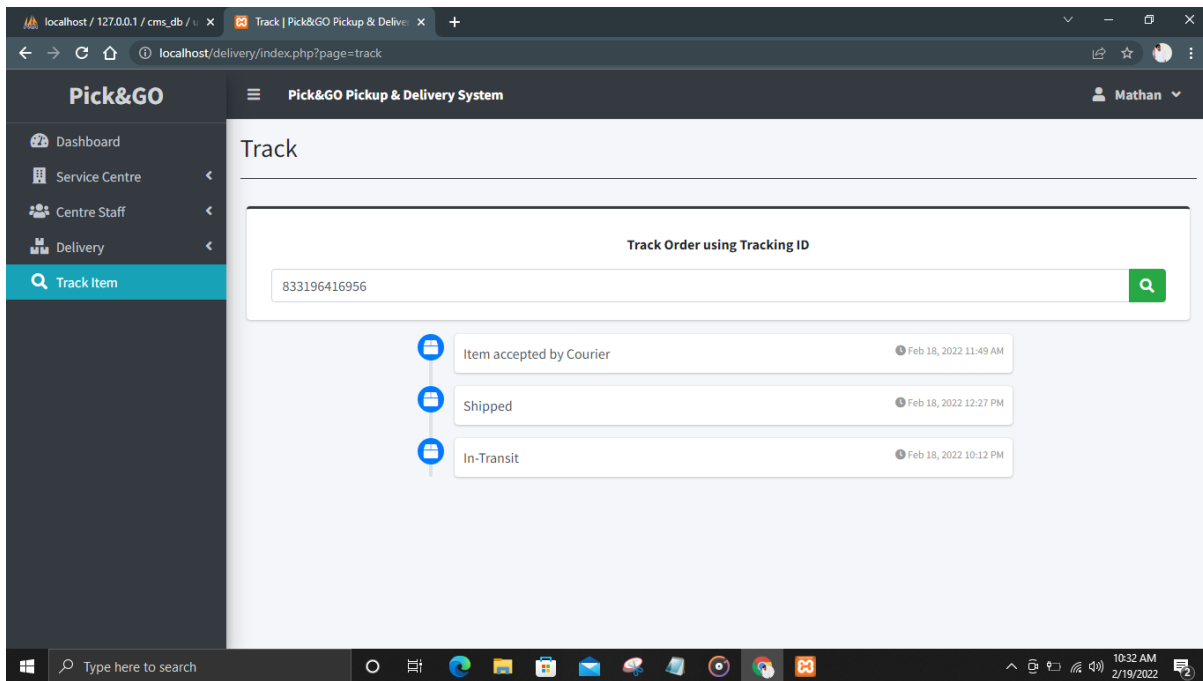


Figure 88: Acceptance test case 10 - evidence 02

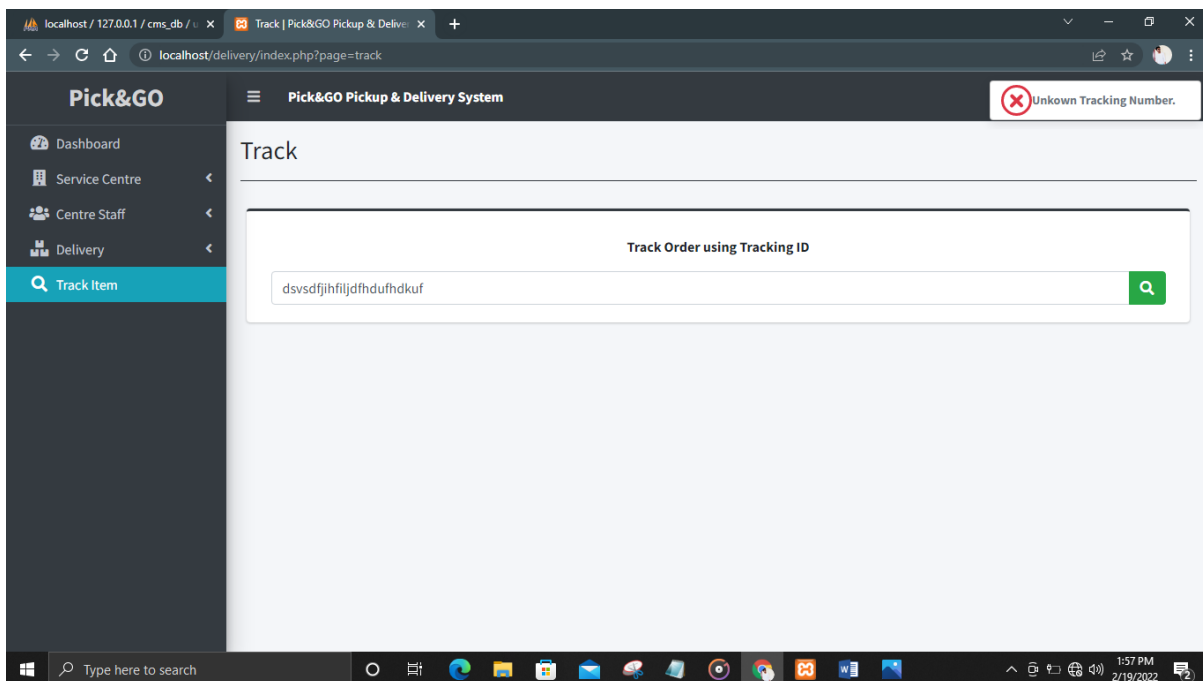


Figure 89: Acceptance test case 10 - evidence 03

Test Report:*Table 16: Acceptance testing report*

Test Report for Pick&GO Pickup & Delivery System			
Test Case ID	Test Description	Test Date	Status
01	Logging into the system.	17/02/2021	PASS
02	Create customer account	17/02/2021	PASS
03	Profile bar	17/02/2021	PASS
04	Add new Service Centre branch	17/02/2021	PASS
05	View, Edit, Delete service centre branch records	17/02/2021	PASS
06	Add new staff record	18/02/2021	PASS
07	View, edit and delete staff records	18/02/2021	PASS
08	Add new pickup record	18/02/2021	PASS
09	View, edit and delete item records	18/02/2021	PASS
10	Track deliveries	18/02/2021	PASS

Test Outcome Evaluation:

Considering that all the test cases in the acceptance testing have passed, the online pick requesting and delivering could be accepted as the final system for Pick&GO. The application also verifies that all the initial requirements have been properly utilized and moved towards the development process. Eventually, this depicts that the final system could be accepted and ready for Pick&GO deployment.

Conclusion

This project was dedicated to develop an online pick requesting and delivering system. This includes the essential requirements necessary to carry out daily operations for Pick&GO package delivery service. The developed software would be a web application, which users can access remotely through the internet. The project timeline started with the process of collecting user and client requirements for the implementation. Collected requirements were then illustrated using multiple diagrams. Following, system interfaces were designed along with the application implementation. Moreover, software testing designs was also applied to ensure the application functionalities are working properly, meeting the requirements. Proper software development and collaborative tools were utilized for an effective and efficient development procedure.

References

- [1] Indeed, “What Is a Web Application? How It Works, Benefits and Examples,” Indeed, 11 November 2021. [Online]. Available: <https://www.indeed.com/career-advice/career-development/what-is-web-application>. [Accessed 16 February 2022].
- [2] B. Lutkevich, “HTML (Hypertext Markup Language),” TechTarget, February 2020. [Online]. Available: <https://www.theserverside.com/definition/HTML-Hypertext-Markup-Language>. [Accessed 16 February 2022].
- [3] D. Megida, “What is JavaScript? A Definition of the JS Programming Language,” freeCodeCamp, 29 March 2021. [Online]. Available: <https://www.freecodecamp.org/news/what-is-javascript-definition-of-js/>. [Accessed 16 February 2022].
- [4] I. Mavuru, “Traditional Software Development Methodology,” KPI Partners, 22 June 2018. [Online]. Available: <https://www.kpipartners.com/blog/traditional-vs-agile-software-development-methodologies>. [Accessed 16 February 2022].