

# SmartShip Package Management System User Manual



University of Technology, Jamaica

Faculty of Engineering and Computing

Produced for: Mr. Christopher Panther

(CIT3009): Advanced Programming

Semester: 1 (2025/26)

November 27, 2025

Produced by:

Asher Maxwell (2107584)

Benjamin Robinson (2000724)

Jhadae Moodie (2304885)

Nathan Bowen (2107584)

## Introduction



The SmartShip Package Management System is a client-server Java application designed for SmartShip Ltd., a courier company that manages both local and international shipments. This system uses modern operations by providing customers with an online portal to create shipment requests, track packages, and pay invoices, while employees (clerks, drivers, and managers) use their assigned portals to manage logistics, vehicles, and reporting.

## Overview of the User Manual

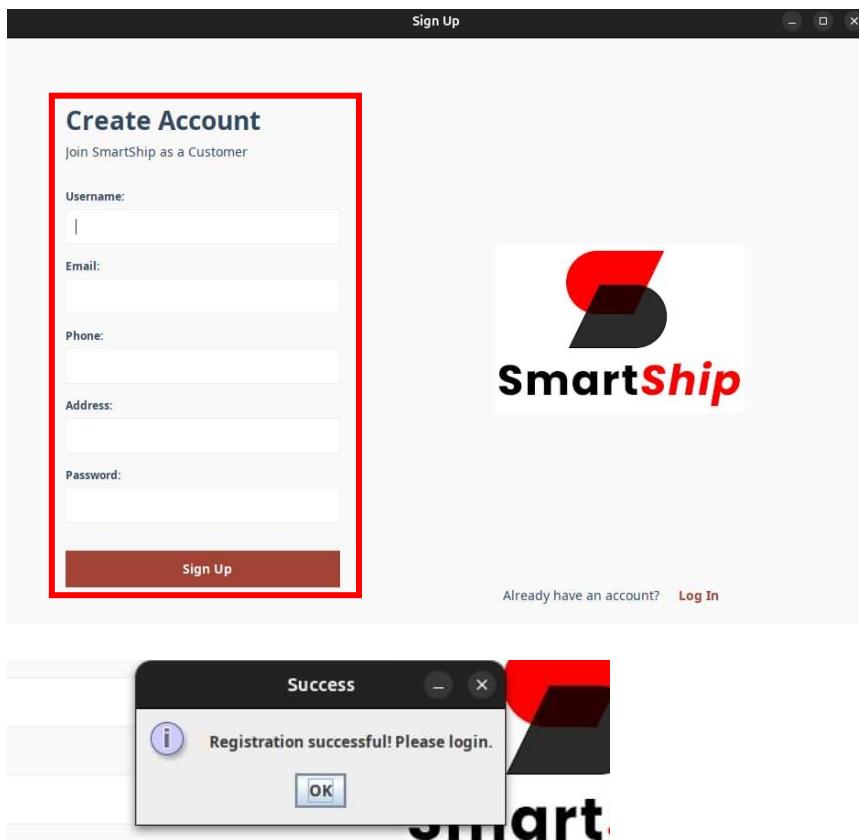
This manual serves as a guide for all user roles:

- **Customers:** Creating accounts, creating shipments, tracking packages, and paying invoices.
- **Clerks:** Processing shipment requests, assigning packages to vehicles, and handling payments.
- **Drivers:** Viewing assigned deliveries and updating package statuses.
- **Managers:** Overseeing operations, generating reports, and managing fleet utilization.

The SmartShip Package Management System has been meticulously developed to enhance courier service delivery through efficient shipment scheduling, secure customer and package management, and comprehensive reporting capabilities. By integrating customer, clerk, driver, and manager portals into a unified platform, the system ensures that all stakeholders can maximize its potential to improve operational efficiency, transparency, and customer satisfaction.

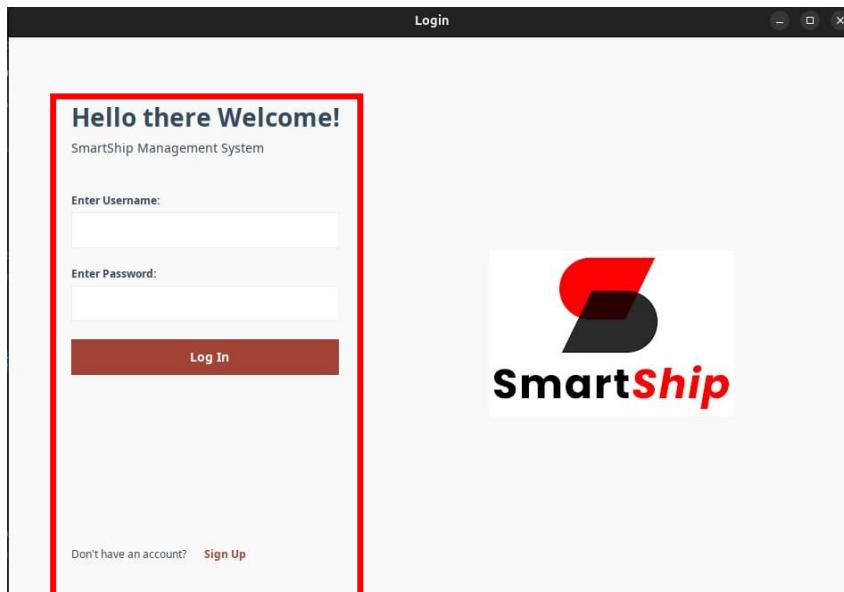
## SmartShip Customer Portal

### 1. Sign-Up



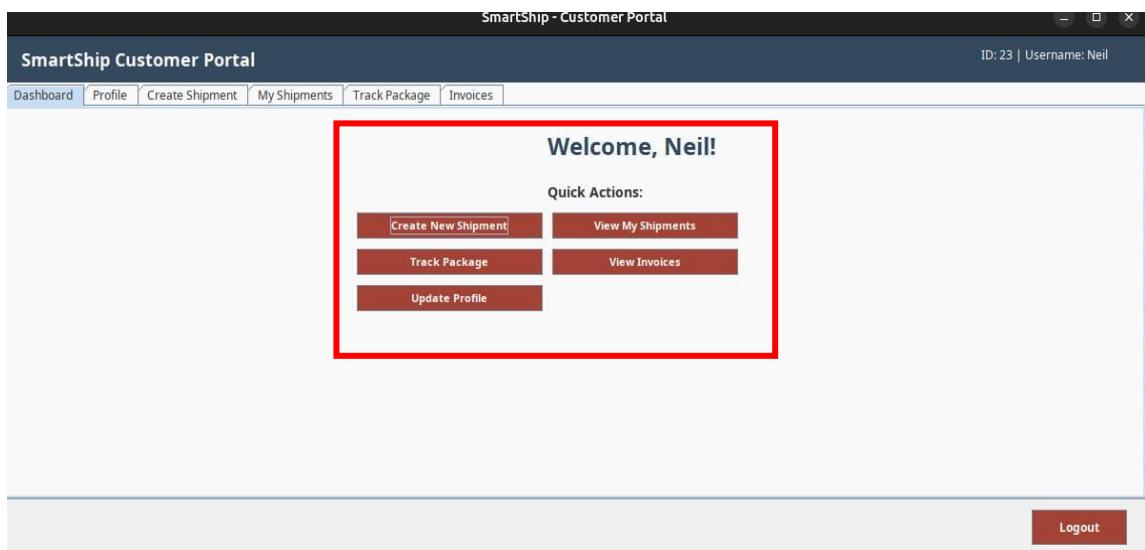
The Sign-Up page allows new customers to register by entering their username, email, phone number, address, and password. Once submitted, the system confirms registration with a success message. Customers can then log in to access the portal.

## 2. Log In



The **Login screen** requires a username and password. If credentials are correct, the customer is redirected to their dashboard. Incorrect credentials prompt an error message.

## 3. Dashboard

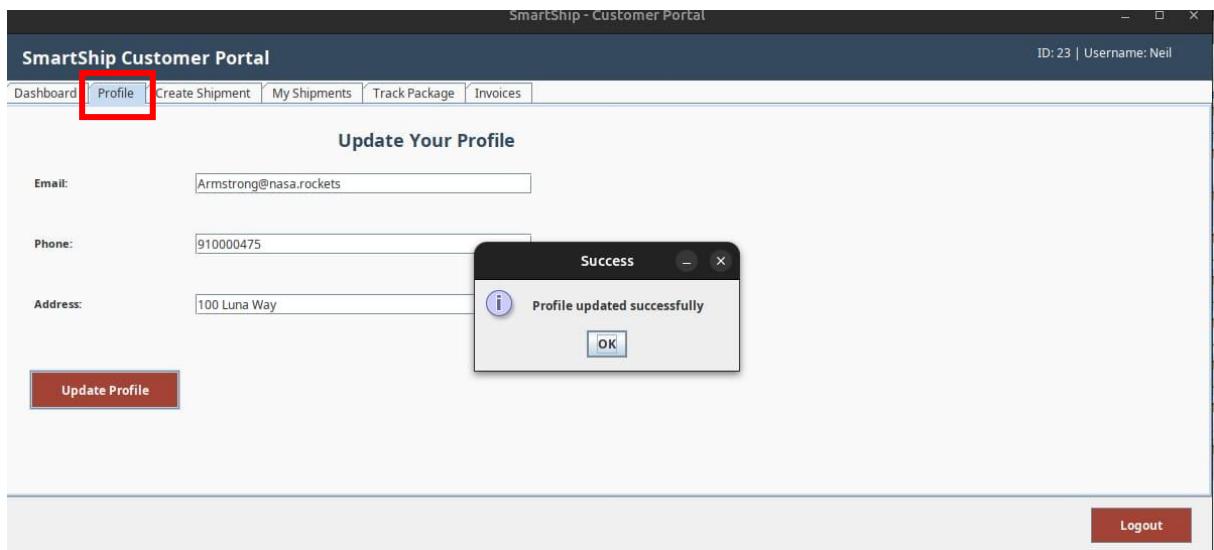


The Dashboard is the central hub for customers. It provides quick access to:

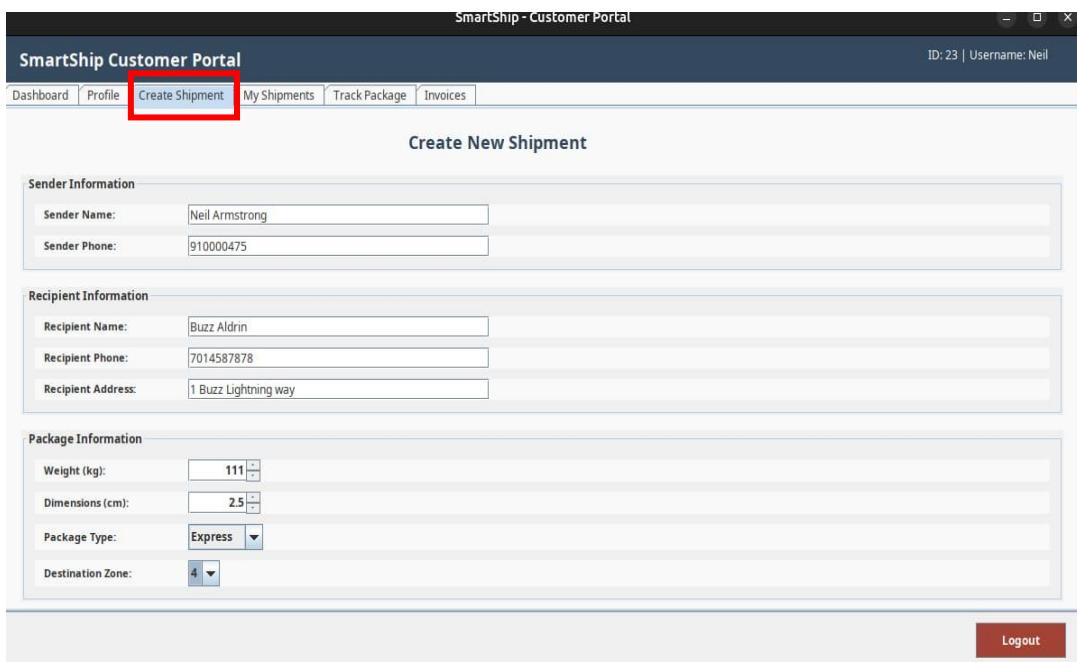
Profile: Update personal details, Create Shipment: Book new deliveries, My Shipments: View shipment history, Track Package: Monitor delivery status, Invoices: Manage billing and payments.

The dashboard reflects the core functionality of the system, giving customers full control over their shipments.

#### 4. Customer Profile Update



## 5. Create New Shipment



The screenshot shows the SmartShip Customer Portal interface. At the top, there's a navigation bar with links for Dashboard, Profile, Create Shipment (which is highlighted with a red box), My Shipments, Track Package, and Invoices. The main content area is titled "Create New Shipment". It contains three sections: "Sender Information" (with fields for Sender Name and Sender Phone), "Recipient Information" (with fields for Recipient Name, Recipient Phone, and Recipient Address), and "Package Information" (with fields for Weight (kg), Dimensions (cm), Package Type, and Destination Zone). A "Logout" button is located at the bottom right of the page.

Customers are able to create a new shipment by entering the required information into the form. The system automatically calculates shipping cost based on weight, type, and zone. A tracking number is generated for each shipment.

## 6. View Shipments

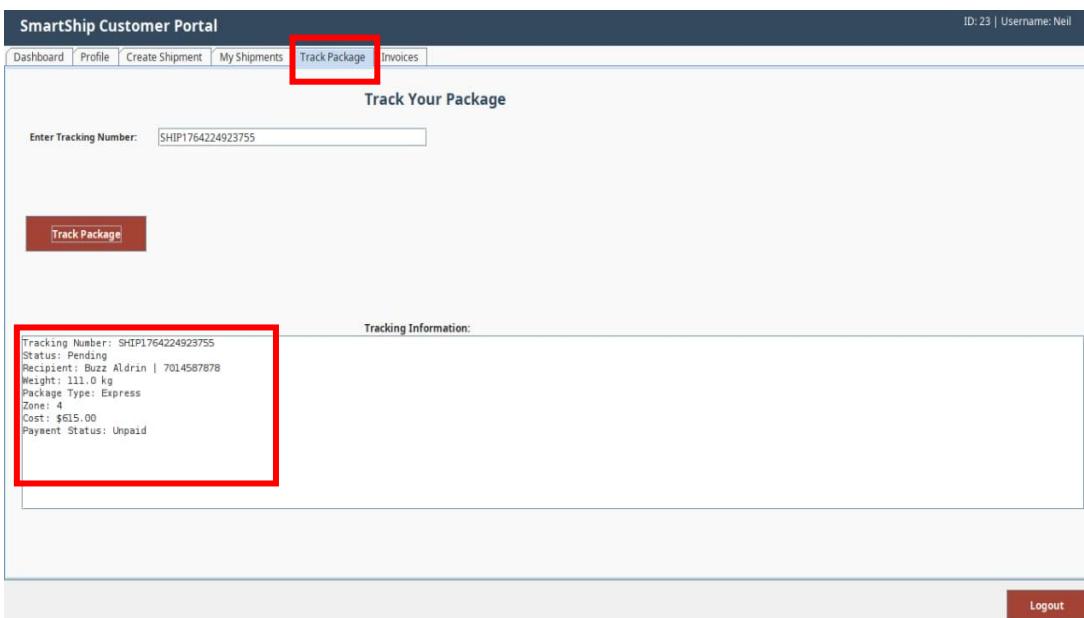


The screenshot shows the SmartShip Customer Portal interface. At the top, there's a navigation bar with links for Dashboard, Profile, Create Shipment, My Shipments (which is highlighted with a red box), Track Package, and Invoices. The main content area is titled "My Shipments" and displays a table with one row of data. The columns are: Tracking #, Recipient, Weight (kg), Type, Zone, Status, Cost, and Payment. The data in the table is: SHIP1764161283047, Jack | 62773567, 3.0, Express, 1, Pending, \$45.00, Unpaid.

Tracking #	Recipient	Weight (kg)	Type	Zone	Status	Cost	Payment
SHIP1764161283047	Jack   62773567	3.0	Express	1	Pending	\$45.00	Unpaid

This page simply allows customers to monitor their shipment status and outstanding payments. Customers can fulfil their payments at the "Invoice" tab.

## 7. Track Package



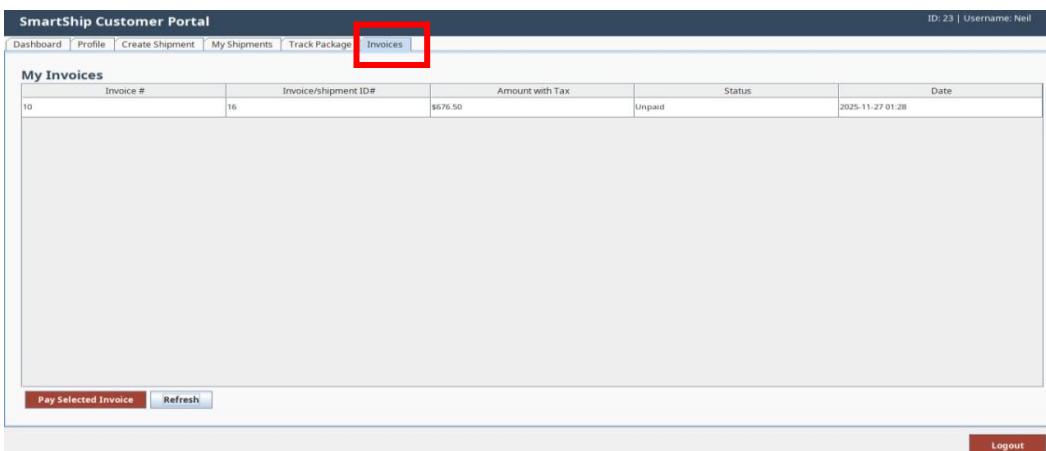
The screenshot shows the SmartShip Customer Portal interface. At the top, there is a navigation bar with links: Dashboard, Profile, Create Shipment, My Shipments, Track Package (which is highlighted with a red box), and Invoices. On the right side of the header, it says "ID: 23 | Username: Neil". Below the header, the main content area has a title "Track Your Package". There is a text input field labeled "Enter Tracking Number:" containing "SHIP1764224923755". Below the input field is a red button labeled "Track Package". Underneath the button, there is a section titled "Tracking Information:" which contains the following details:

Tracking Number:	SHIP1764224923755
Status:	Pending
Recipient:	Buzz Aldrin   7014587878
Weight:	111.0 kg
Package Type:	Express
Zone:	1
Cost:	\$615.00
Payment Status:	Unpaid

At the bottom right of the content area is a "Logout" button.

Customers can enter their tracking number to view real-time shipment status. A display of the package details, cost, and payment status is shown.

## 8. View Invoices



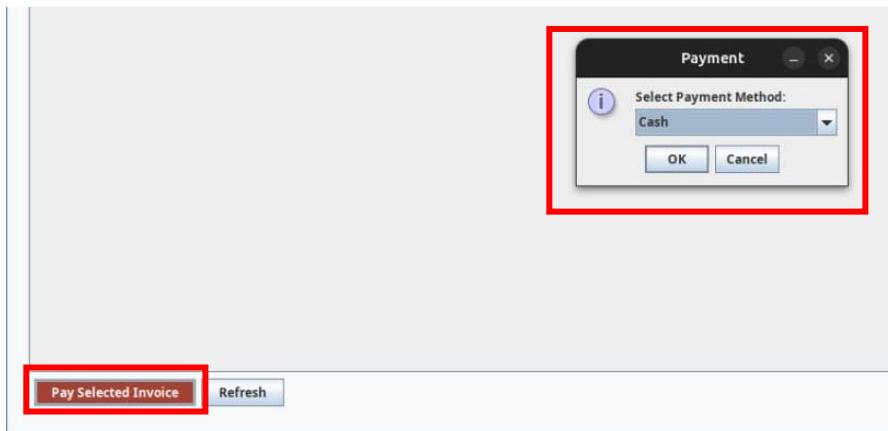
The screenshot shows the SmartShip Customer Portal interface. At the top, there is a navigation bar with links: Dashboard, Profile, Create Shipment, My Shipments, Track Package (which is highlighted with a red box), and Invoices. On the right side of the header, it says "ID: 23 | Username: Neil". Below the header, the main content area has a title "My Invoices". There is a table with the following data:

Invoice #	Invoice/shipment ID#	Amount with Tax	Status	Date
10	16	\$676.50	Unpaid	2025-11-27 01:28

At the bottom left of the content area are two buttons: "Pay Selected Invoice" and "Refresh". At the bottom right is a "Logout" button.

From this tab, customers can pay for an invoice when they select the “Pay Selected Invoice” button.

They can choose their desired payment method from here:



Once a payment is complete, the status will be changed to “Paid”:

Invoice ID#	Amount with Tax	Status	Date
	\$49.50	Paid	2025-11-26 07:47

A 'Success' dialog box is overlaid on the interface, stating 'Payment completed successfully!' with an 'OK' button.

The payment will be processed and a receipt is then generated:

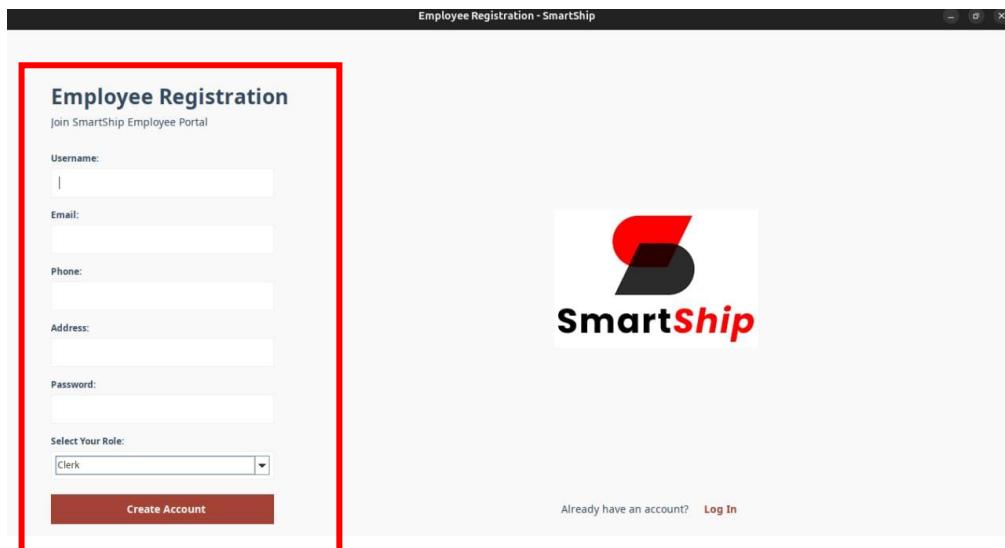
A screenshot of a software interface showing a 'Payment Receipt' dialog box. The dialog box contains the following information:

- Receipt No: PAY1764225036181
- Invoice ID: 10
- Tracking Number: SHIP1764224923755
- Customer: Neil
- Email: Armstrong@nasa.rocks
- Address: 100 Luna Way
- Payment Method: Card
- Amount: \$676.50
- Date & Time: 2025-11-27 01:30:36
- Shipment Status: Pending

At the bottom of the dialog box is a 'Close' button.

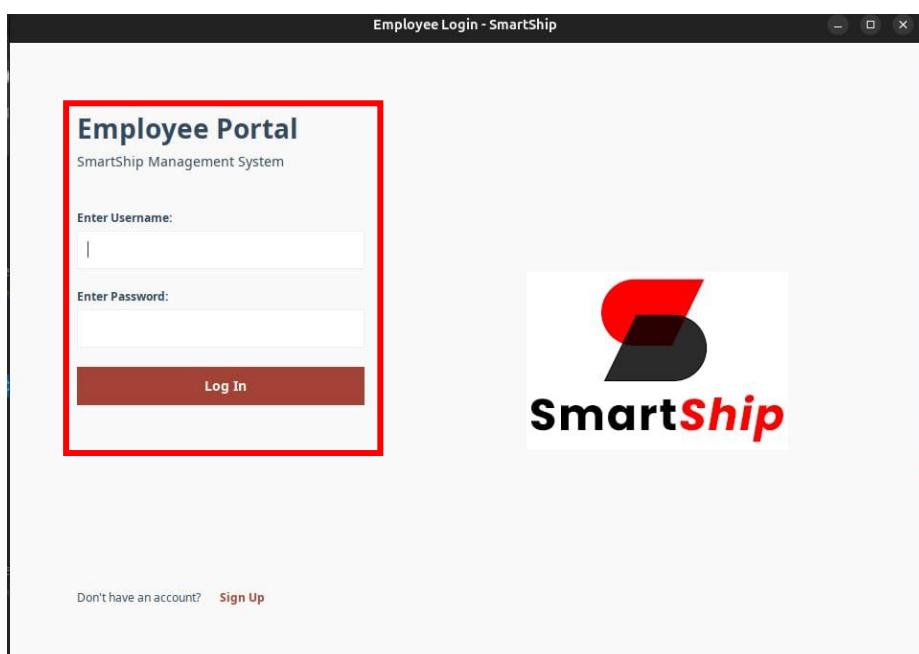
## SmartShip Employee Portal

### 1. Sign Up



Employees (clerks, drivers, managers) register with their role specified.

### 2. Log In



Login provides secure access to their respective dashboards.

### 3. Manager Dashboard

The screenshot shows the Manager Dashboard of the SmartShip Manager Portal. On the left, a sidebar titled 'MANAGER Control Panel' includes links for Dashboard, Pending Shipments (which is selected and highlighted with a red box), Reports, Profile, and Fleet Management. At the bottom of the sidebar are 'Logout' and 'Logout' buttons. The main area is titled 'Manager Dashboard' with a 'Refresh Now' button. It features three cards: 'Pending Shipments' (3), 'Today's Deliveries' (1), and 'Total Revenue (\$615.00)'. Below these cards are buttons for 'View Pending Ship...', 'Generate Report', and 'View Fleet'.

Managers oversee operations with metrics such as: Pending shipments, Today's Deliveries and Total Revenue.

### Pending Shipments

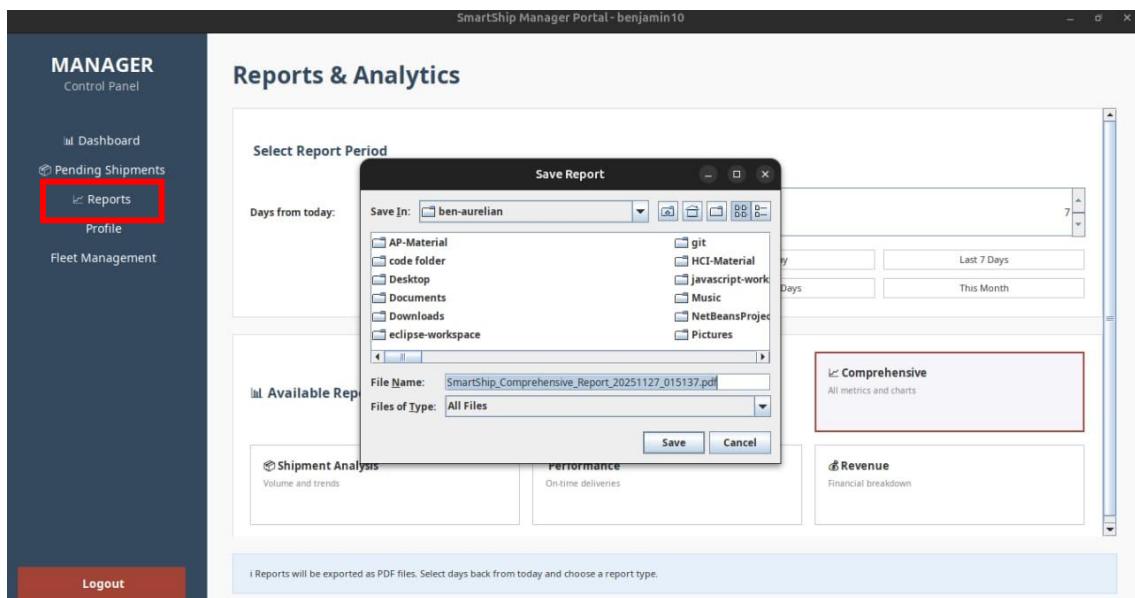
The screenshot shows the Pending Shipments page of the SmartShip Manager Portal. The sidebar on the left is identical to the Manager Dashboard. The main area is titled 'Pending Shipments' with a 'Refresh' button. A table lists pending shipments with columns for Shipment ID, Tracking #, Customer, Weight (kg), Zone, and Type. The table data is as follows:

Shipment ID	Tracking #	Customer	Weight (kg)	Zone	Type
4	SHIP1763864383778	benjamin	2.5	3	Standard
12	SHIP1763909485035	benjamin	4.0	4	Express
16	SHIP1764224923755	Neil	111.0	4	Express

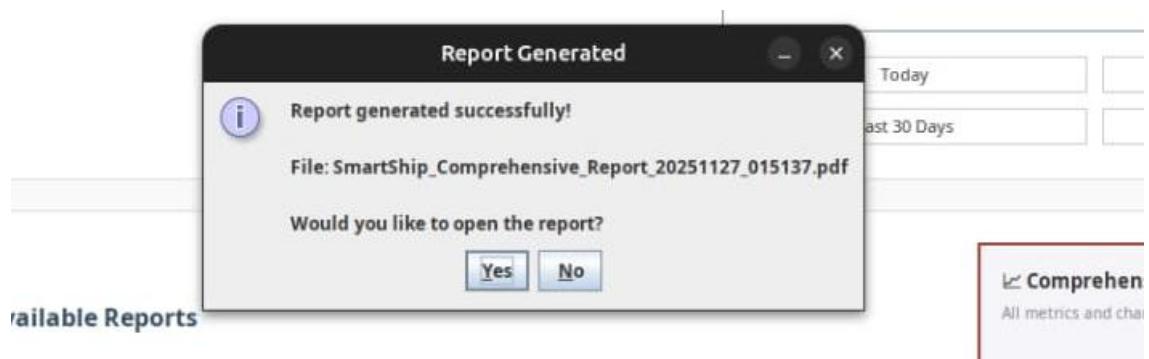
At the bottom of the page is a red box around the 'Assign to Vehicle' button.

From this tab, employees can assign a shipment to a vehicle.

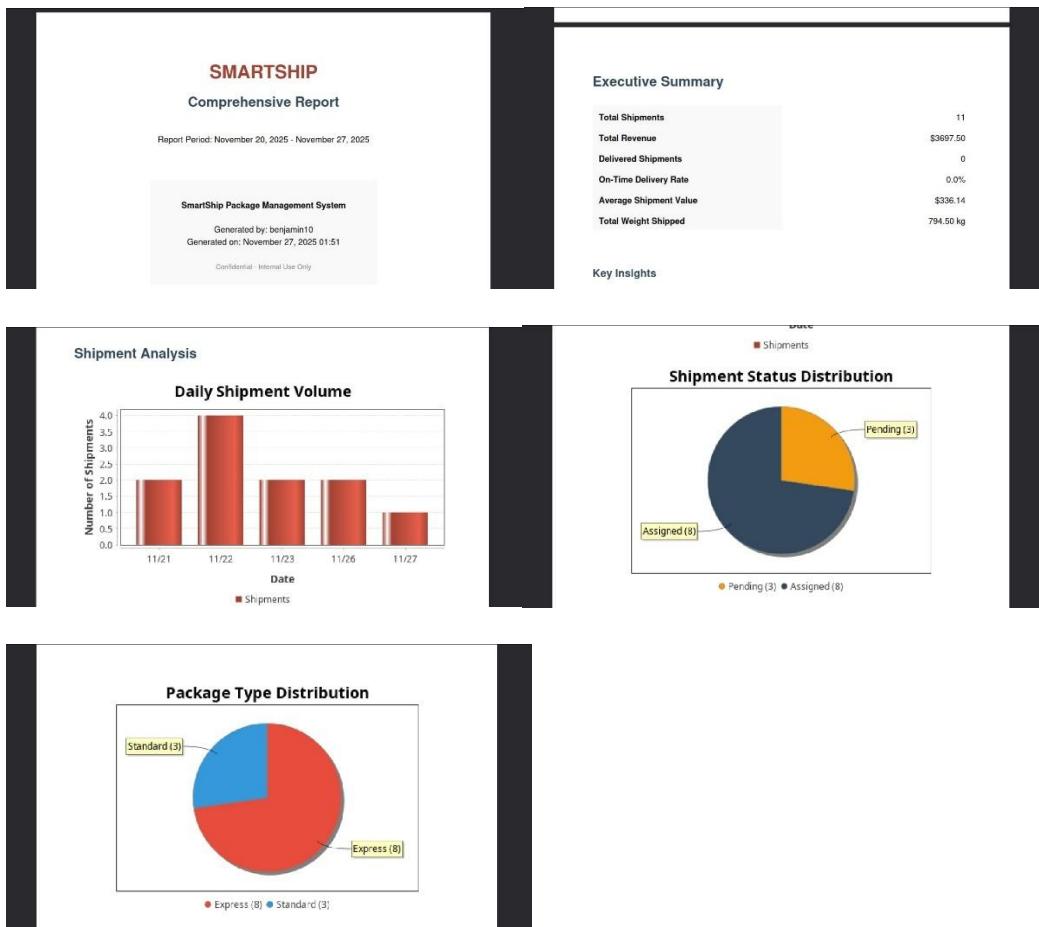
## Report & Analytics



Managers generate PDF reports with shipment analysis, revenue breakdown, and delivery performance. Reports include charts for shipment volume, package type distribution, and vehicle utilization. Managers can save the report as a file.



## Results when a report is generated:



## Fleet Management

**Manager Control Panel**

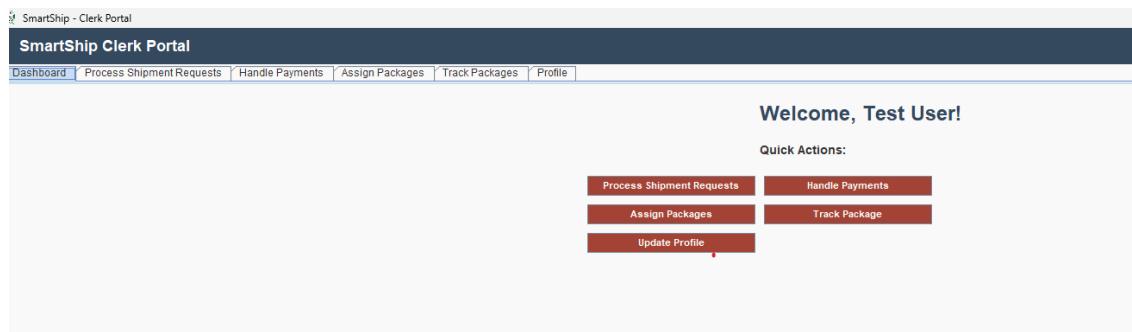
**Fleet Management**

Vehicle ID	Vehicle #	Type	License Plate	Driver	Capacity (kg)	Current Load (kg)	Available (kg)	Items	Zone	Status
9	VEH-001	Van	ABC-1234	john_driver	500.00	500.00	0.00	1	1	Available
10	VEH-002	Truck	DEF-5678	jane_driver	1000.00	153.50	846.50	2	1	In Use
11	VEH-003	Van	GHI-9012	bob_driver	500.00	11.00	489.00	2	2	In Use
12	VEH-004	Truck	JKL-3456	Unassigned	1500.00	12.50	1487.50	3	2	Available

**Logout**    **View Details**    **View Packages**

This tab displays all vehicle details as well as its availability status. Managers can add vehicles, assign packages, and monitor utilization. This ensures no vehicle is overbooked and this supports fleet scheduling.

## 4. Clerk Dashboard



From here, clerks have quick access to operations such as shipment requests, payment management and the assignment of packages to drivers, vehicles and routes.

### Process Shipment Requests

The clerk is able to oversee all customer shipments:

Tracking #	Recipient	Weight (kg)	Type	Zone	Status	Cost	Payment
SHIP1764259834141	Asher Maxwell   87677173...	3.0	Express	4	Shipped	\$75.00	Paid
SHIP1764164693345	Jack   52616627	2.5	Fragile	2	Shipped	\$47.50	Paid
SHIP1764164631098	Asher   8767717389	1.0	Express	1	Delivered	\$35.00	Paid
SHIP1764161263047	Jack   62773567	3.0	Express	1	Pending	\$45.00	Paid
					Pending		
					Shipped		
					Delivered		
					Cancelled		

The clerk can change the shipment and payment status:

The left screenshot shows a dropdown menu for 'Status' with options: Shipped, Pending, Shipped, Delivered, and Cancelled. The 'Shipped' option is highlighted with a red box. The right screenshot shows a dropdown menu for 'Payment' with options: Paid, Unpaid, Paid, and Unpaid. The 'Paid' option is highlighted with a red box.

The clerk can handle all customer payments and view the invoices:

Tracking #	Customer	Recipient	Status	Cost	Payment	Payment Method
SHIP1764259834141	Hannah	Asher Maxwell   8767717389	Shipped	\$75.00	Paid	Cash
SHIP1764164693345	Hannah	Jack   52616627	Shipped	\$47.50	Paid	Card
SHIP1764164631098	Hannah	Asher   8767717389	Delivered	\$35.00	Paid	N/A
SHIP1764161263047	Asher	Jack   62773567	Shipped	\$45.00	Paid	Card

SmartShip - Clerk Portal

SmartShip Clerk Portal

Handle Customer Payments

Tracking #	Customer	Recipient	Status	Cost	Payment	Payment Method
SHIP1764259834141	Hannah	Asher Maxwell   8767717389	Shipped	\$75.00	Paid	Cash
SHIP1764164693345	Hannah	Jack   52616627	Shipped	\$47.50	Paid	Card
SHIP1764164631098	Hannah	Asher   8767717389	Delivered	\$35.00	Paid	N/A
SHIP1764161263047	Asher	Jack   62773567	Shipped	\$45.00	Paid	Card

Handle Customer Payments

Invoice Details

SHIPMENT INVOICE

Tracking Number: SHIP1764161263047  
Recipient: Jack | 62773567  
Weight: 3.0 kg  
Package Type: Express  
Zone: 1  
Status: Shipped

Subtotal: \$45.00  
Tax (10%): \$4.50  
TOTAL: \$49.50

Payment Status: Paid

OK

View Customer Invoice Refresh Logout

The clerk can assign packages:

Tracking #	Recipient	Weight (kg)	Type	Zone	Status	Cost	Payment	Assign Driver	Assign Vehicle	Assign Route
SHIP1764259834141	Asher Maxwell   8...	3.0	Express	4	Shipped	\$75.00	Paid	Select Driver	Select Vehicle	Route E - Central
SHIP1764164693345	Jack   52616627	2.5	Fragile	2	Shipped	\$47.50	Paid	Adrian (ID: 2)	JM-EV-007 (ID: 6)	Route A - North
SHIP1764164631098	Asher   8767717389	1.0	Express	1	Delivered	\$35.00	Paid	Bob (ID: 1)	JM-BIKE-99 (ID: 3)	Route C - East
SHIP1764161263047	Jack   62773567	3.0	Express	1	Shipped	\$45.00	Paid	Adrian (ID: 2)	JM-VAN-001 (ID: 1)	Route A - North

### Driver assigned:

The screenshot shows a software window titled "ID: 9 | Username: Test User". At the top, there are three tabs: "Assign Packages", "Track Packages", and "Profile". Below the tabs is a table with columns: Type, Zone, Status, Cost, Payment, Assign Driver, Assign Vehicle, and Assign Route. The "Assign Driver" column for the first row contains a dropdown menu with "Adrian (ID: 2...)" selected. A red box highlights this dropdown. The "Assign Vehicle" and "Assign Route" columns for the first row also contain dropdown menus. A "Success" dialog box is overlaid on the main window, containing the message "Driver assigned successfully to tracking #SHIP1764164693345" and an "OK" button.

Type	Zone	Status	Cost	Payment	Assign Driver	Assign Vehicle	Assign Route
2	Shipped	\$47.50	Paid	Adrian (ID: 2...)	Select Vehicle --	Select Route	
1	Shipped	\$35.00	Paid	-- Select Driver --	Select Vehicle --	Select Route	
1	Pending	\$45.00	Unpaid	-- Select Driver --	Select Vehicle	Select Route	

### Vehicle assigned:

The screenshot shows a software window titled "ID: 9 | Username: Test User". At the top, there are three tabs: "Assign Packages", "Track Packages", and "Profile". Below the tabs is a table with columns: Type, Zone, Status, Cost, Payment, Assign Driver, Assign Vehicle, and Assign Route. The "Assign Vehicle" column for the first row contains a dropdown menu with "Select Vehicle" selected. A red box highlights this dropdown. The "Assign Route" column for the first row also contains a dropdown menu. A dropdown menu for "Assign Vehicle" is open, showing options: "JM-EV-007 - Electric", "JM-BIKE-99 - Motor", "JM-TRK-505 - Truck", and "JM-VAN-001 - Van".

Type	Zone	Status	Cost	Payment	Assign Driver	Assign Vehicle	Assign Route
2	Shipped	\$47.50	Paid	Adrian (ID: 2, Deliv...	-- Select Vehicle --	Select Route	
1	Shipped	\$35.00	Paid	-- Select Driver --	-- Select Vehicle --	Select Route	
1	Pending	\$45.00	Unpaid	-- Select Driver --	JM-EV-007 - Electric	Select Route	

### Route Assigned:

The screenshot shows a software window titled "ID: 9 | Username: Test User". At the top, there are three tabs: "Assign Packages", "Track Packages", and "Profile". Below the tabs is a table with columns: Type, Zone, Status, Cost, Payment, Assign Driver, Assign Vehicle, and Assign Route. The "Assign Route" column for the first row contains a dropdown menu with "Route A - N..." selected. A red box highlights this dropdown. The "Assign Vehicle" and "Assign Route" columns for the first row also contain dropdown menus. A "Success" dialog box is overlaid on the main window, containing the message "Route assigned successfully to tracking #SHIP1764164693345" and an "OK" button.

Type	Zone	Status	Cost	Payment	Assign Driver	Assign Vehicle	Assign Route
2	Shipped	\$47.50	Paid	Adrian (ID: 2, Deliv...	JM-EV-007 - Electric	Route A - N...	
1	Shipped	\$35.00	Paid	-- Select Driver --	-- Select Vehicle --	Select Route	
1	Pending	\$45.00	Unpaid	-- Select Driver --	Select Vehicle	Select Route	

# **END OF MANUAL**

Last Reviewed: November 27, 2025