

USER INTERFACES

Too many screenshots in this section. You can drop some of the figures because I will see the server pages during the demo.

Main Page:

The main page is the webpage every client or management will see when they access the server. The main page is responsible for differentiating which portal the end user will access. The main page divides between “Client” and “Management” into two distinct categories. Upon clicking on the “Client” category the end user will be directed to the “Client” login/signup portal. Or, upon clicking on the “Management” category the end user will be directed to the “Management” login portal.



Figure 3. Main Page

Client Module:

Customer Login Page

The customer login page which has two input boxes which requires customer's email and password to login into the customer system of this DHL system. The customer will need to fill in their respective email and password if they fail to do so the system will show an error message. The error message “Email is required” if the customer fails to fill in their email or “Password is required” when the customer did not fill the password input box.

The email and password of the customers are linked to the variables in the customers table in the system's database. The customer then can click on the “Login” button to be directed to the customer's home screen. If the customer does not have an account initially, they can click the “Sign Up Now!” link to register as a new customer.

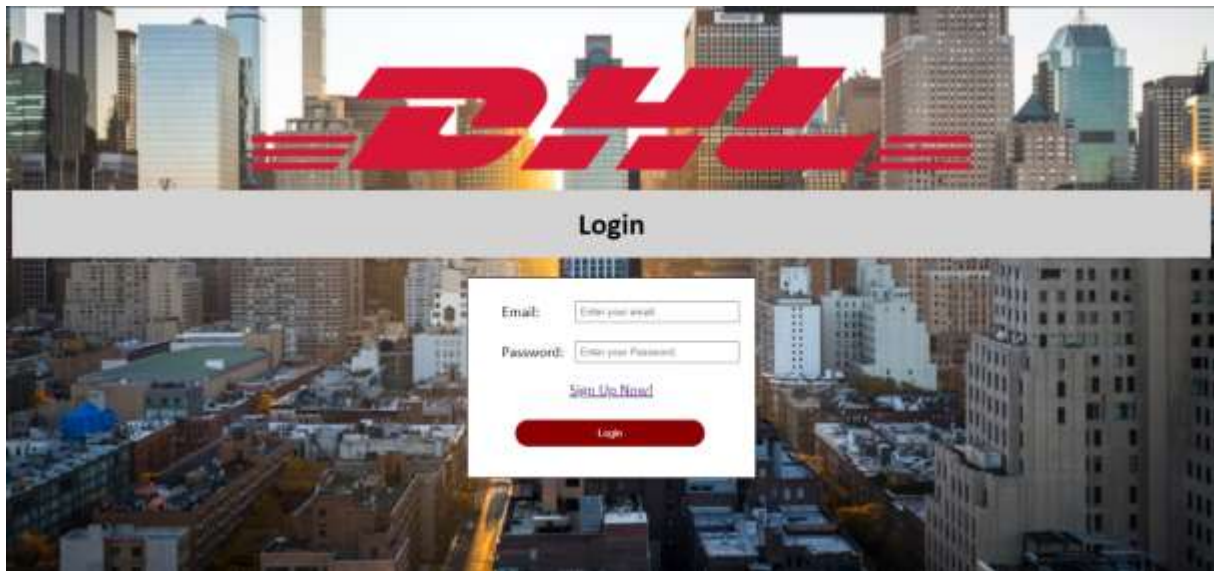
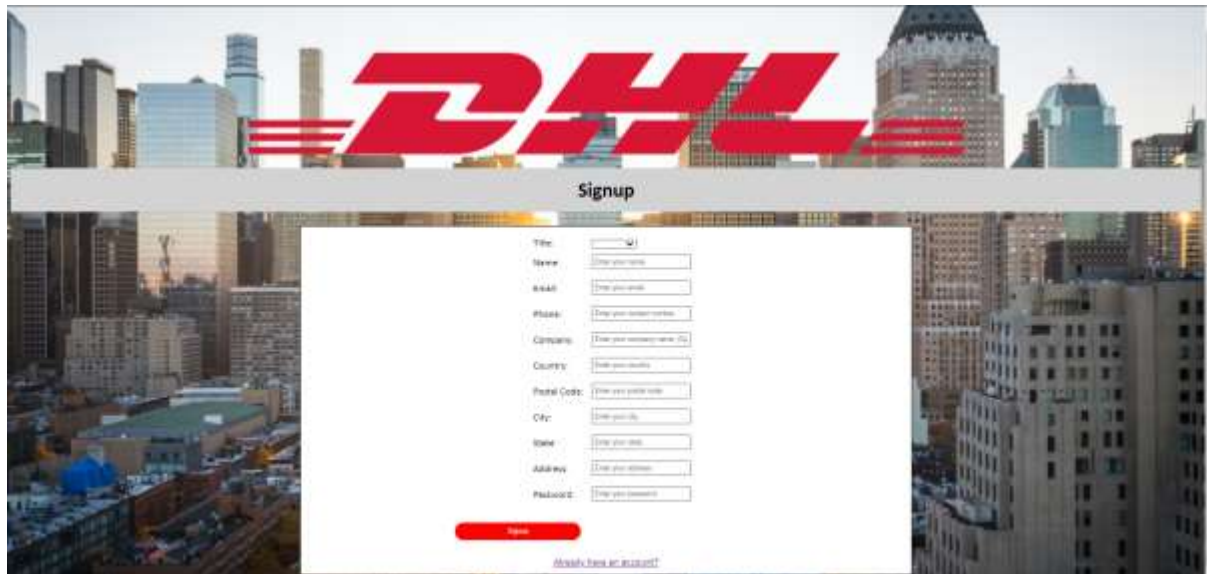


Figure 4. Customer Login Page

Customer Sign Up/Registration Page

The customer sign up page consists of several input boxes for the customers to fill up their personal details to register as a new customer to access into the DHL system as a customer. This page has a “Title” input box which will display options such as “None, Dr., Mr., Ms., Mrs., Miss.” for the customers to choose. Then they will have to fill in their “Name”, “Email”, “Phone”, “Company”, “Country”, “Postal Code”, “City”, “State”, “Address” and “Password”. If the customers fail to fill in any of the fields an error message “Please fill out this field.” will pop up to remind the customers to fill in all the fields in this page.

After clicking the “Signup” button the details that have been entered by the customers will be stored in the customers table in the system’s database. If the details that the customer has been stored in the database this page will show “Successfully Registered” message while “Registration Failed!” message will be shown if the customer's details were not stored in the database. The “Already have an account?” will bring the customers back to the login page for the customers to login into the customers system.



The image shows the DHL Customer Sign Up page. At the top is the DHL logo in red, set against a background of a city skyline. Below the logo is a grey bar with the word "Signup" in black. The main content is a white form with the following fields: Title (dropdown), Name (text), Email (text), Phone (text), Company (text), Country (text), Postal Code (text), City (text), State (text), Address (text), and Password (text). Each field has a placeholder text. Below the form is a red "Sign Up" button. At the bottom of the form, there is a link that says "Already have an account?".

Signup

Title:

Name:

Email:

Phone:

Company:

Country:

Postal Code:

City:

State:

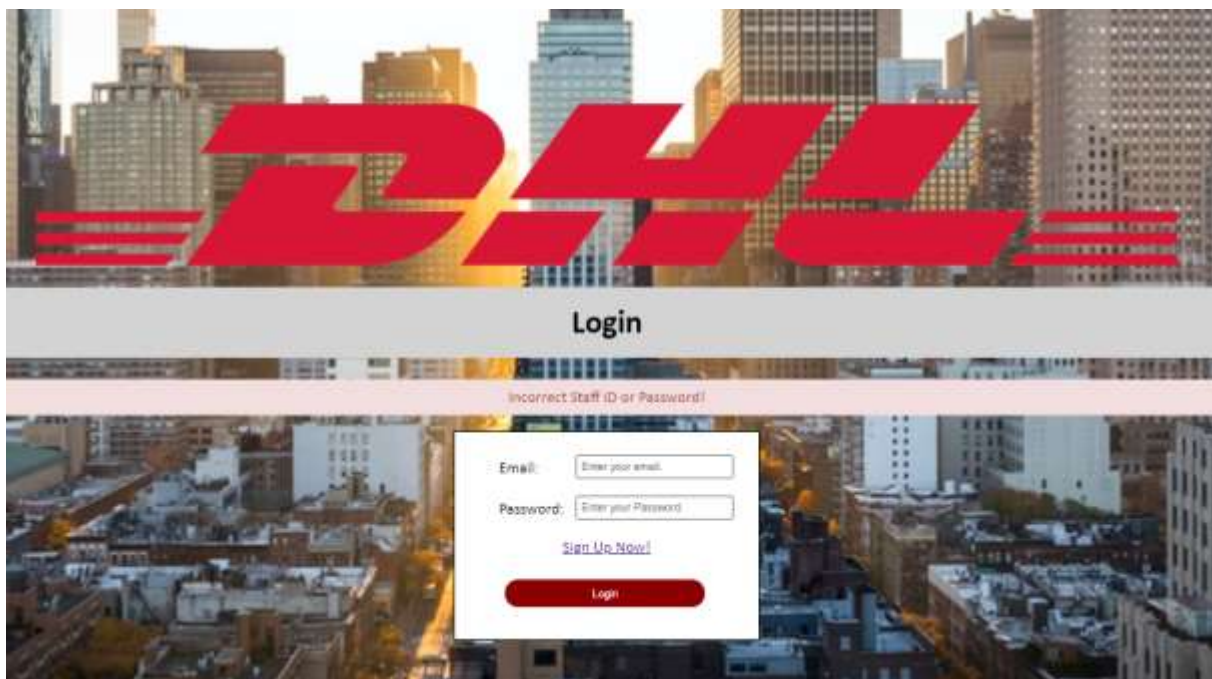
Address:

Password:

[Sign Up](#)

[Already have an account?](#)

Figure 5. Customer Sign Up Page



The image shows the DHL Login page. At the top is the DHL logo in red, set against a background of a city skyline. Below the logo is a grey bar with the word "Login" in black. Below this is a pink error message bar that says "Incorrect Staff ID or Password!". Below the error message is a white form with the following fields: Email (text) and Password (text). Each field has a placeholder text. Below the form is a red "Login" button. To the left of the "Login" button is a link that says "Sign Up Now!".

Login

Incorrect Staff ID or Password!

Email:

Password:

[Sign Up Now!](#)

[Login](#)

Figure 6. Incorrect credentials error message.

Customer Home Screen/Dashboard

The customers home screen or dashboard after the customer login into the customer's system. This page will display the menu table at the left side of this page. In the menu there are three links for the customers to click into and navigate to different pages. "Track My Delivery Status" and "Make Delivery Request" link is for the customer to make a request and check the delivery status. "Logout" link will logout the customer from the customer's system of the DHL system.

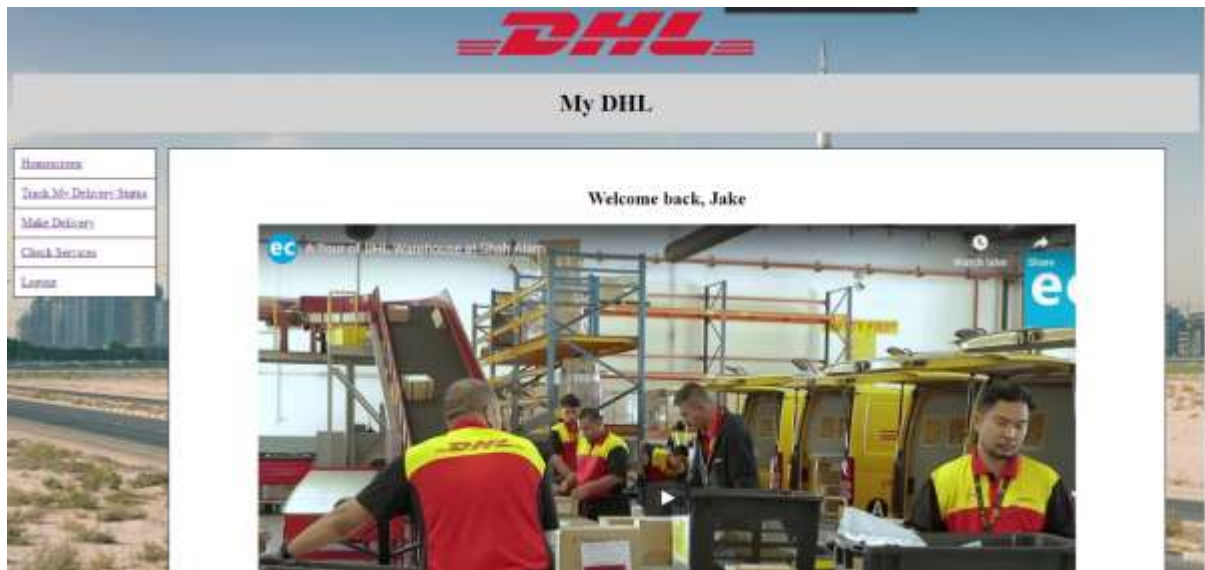



Figure 7. Customer Homescreen

Make Delivery Request

The service page where the customers will place their request for the delivery. In this page the customers can fill in the details of the client's details and the recipients details that the customers want to deliver their product to. The customer needs to fill in the input boxes to make the request. "Please fill out this field." error will pop up if the customer fails to fill out any input boxes that are provided in this page.

Once the customer clicks the "Submit" button the details that have been entered by the customer will be stored in the database with the "A new request of service has been added!" message in the request of the service server page. If the request is not added to the database "Insertion of new request failed." message will pop up in the server page. Upon the successful SQL insertion, the page will create a xml file and will create an xml dom object.

One important thing to note is the Capacity limit of 70 kilograms. If the end user enters a capacity exceeding 70 kilograms, the system will return a JavaScript alert message warning the end user that the capacity cannot exceed 70 kilograms and will not process the request.



Make Delivery

Homepage

Track My Delivery Status


Make Delivery

Check Services

Logout

Client Name:	<input type="text" value="Jake"/>
Contact Number:	<input type="text"/>
Client Address:	<input type="text"/>
Delivery Service:	<input type="text" value="Domestic"/>
Shipping Date:	<input type="text" value="mm/dd/yyyy"/>
Shipping Location:	<input type="text"/>
Transportation Type:	<input type="text" value="Air Freight"/>
Capacity (Kilograms):	<input type="text"/>
Credit Card Number:	<input type="text"/>
Bank Account Number:	<input type="text"/>
Description (Optional):	<input type="text" value="Enter description here..."/>

[Return to Homepage](#)








Figure 8. Request of Service Page

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

<CustomerInfo>
  <link type="text/css" rel="stylesheet" id="dark-mode-general-link"/>
  <link type="text/css" rel="stylesheet" id="dark-mode-custom-link"/>
  <style lang="en" type="text/css" id="dark-mode-custom-style"/>
  <Customer>
    <name>Jake</name>
    <contact_number>1111</contact_number>
    <OriginAddress>SUBANG JAYA</OriginAddress>
    <ShippingLocation>KUL</ShippingLocation>
    <DeliveryService>Domestic</DeliveryService>
    <TransportType>Air Freight</TransportType>
    <Capacity>11</Capacity>
    <CreditCardNumber>1111</CreditCardNumber>
  </Customer>
  <Customer>
    <name>Jake</name>
    <contact_number>2222</contact_number>
    <OriginAddress>2222</OriginAddress>
    <ShippingLocation>2222</ShippingLocation>
    <DeliveryService>Domestic</DeliveryService>
    <TransportType>Air Freight</TransportType>
    <Capacity>11</Capacity>
    <CreditCardNumber>2222</CreditCardNumber>
  </Customer>
  <Customer>
    ...
  </Customer>
  <Customer>
    ...
  </Customer>
  <Customer>
    ...
  </Customer>
  <Customer>
    ...
  </Customer>
  <Customer>
    ...
  </Customer>
</CustomerInfo>

```

Figure 9. Preview of the XML file generated.



Request Of Service



Order Confirmed!


Your Tracking Number is: 81

[Return to customer portal.](#)

Figure 10. The confirmation page the client will receive upon successful transaction.

Track Delivery Request

The track delivery request allows the client to track their delivery orders based on the tracking number which they are provided each time the client makes an order.



Tracking Delivery

[HomeScreen](#)
[Track My Delivery Status](#)
[Make Delivery](#)
[Check Services](#)
[Logout](#)

Search Tracking Number:

Search

Tracking Number	Available For Pickup	Pending	Out For Delivery	Received	Destination	Estimated Delivery Time	Description
88	NO	YES	NO	NO	4444	T	4444




Figure 11. Checking order status by using tracking number.



Tracking Delivery

r:

Search

p

Pending

Out For Delivery

Please fill out this field.

tion

Estimated Delivery Time

Description

Figure 12. Input validation. End user must enter something to prevent the system from displaying all the records from other orders.

Check Services

The check services allows the client to check for all the services DHL offers as well as display important data such as estimated delivery time, foreign taxations, capacity and pricing for each transportation type.

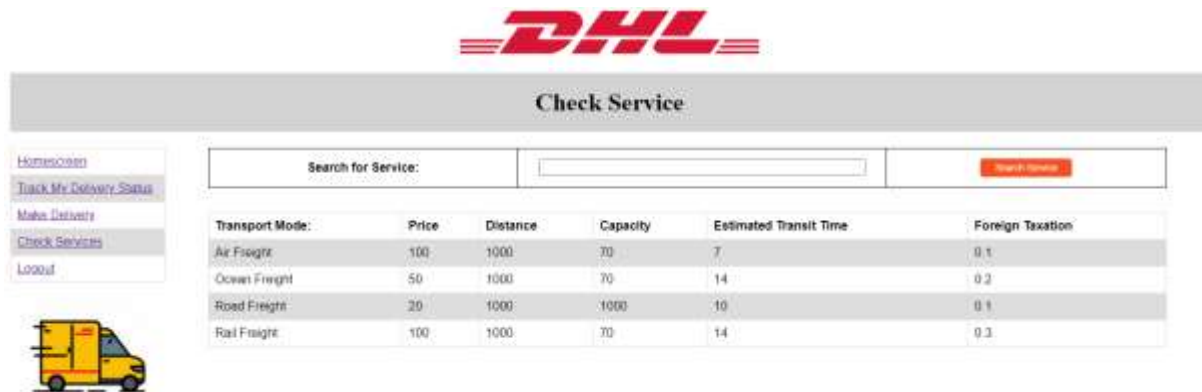


Figure 13. By default, the system displays all the services DHL offers.

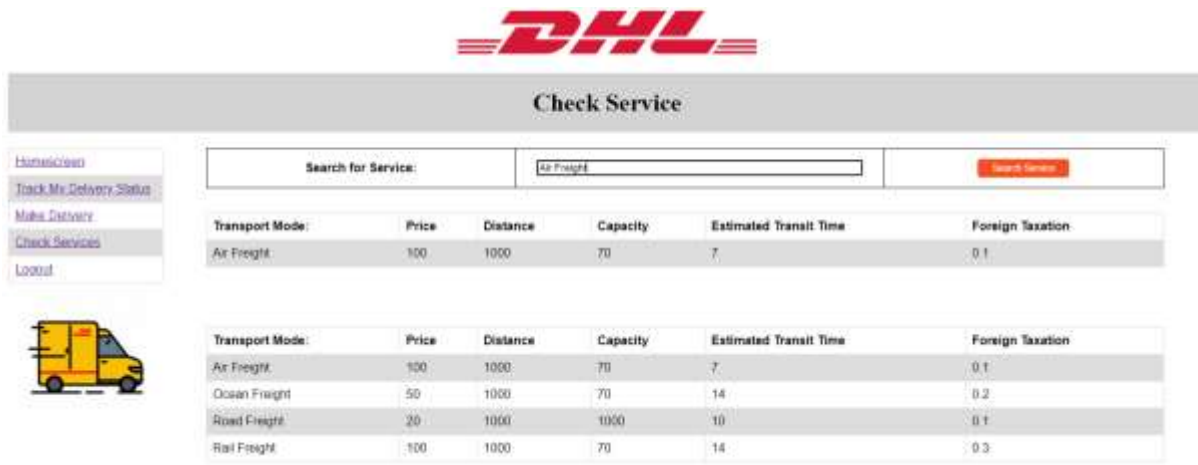


Figure 14. By using the search bar, end user can search for specific services based on the entered keyword.

Management Module:

Management Dashboard

Upon successful authentication at the management login page, the end user will be directed to the management dashboard. Here, the page will greet the end user and their position based on their respective names and positions from the “staff table”.




Figure 15. The manager's point of view in the dashboard



Figure 16. The employee's point of view in the dashboard



Management Module: Schedules Management (Add Schedules)

Billing Name:	<input type="text"/>
Origin Address:	<input type="text"/>
Destination Address:	<input type="text"/>
Delivery Mode:	<input type="text"/>
Status:	<input type="text"/>
Estimated Delivery Time(days):	<input type="text"/>
Delivery Date:	<input type="text" value="mm/dd/yyyy"/> 
Unit Price:	<input type="text"/>
Maximum Capacity(kilograms):	<input type="text"/>

[Return to Delivery Management](#)

Figure 19. The adding of schedules function



Management Module: Schedules Management (Update Schedules)

Schedule ID:	<input type="text"/>
Origin Address:	<input type="text"/>
Destination Address:	<input type="text"/>
Delivery Mode:	<input type="text"/>
Status:	<input type="text"/>
Estimated Delivery Time(days):	<input type="text"/>

[Return to Delivery Management](#)

Figure 20. The adding of schedules function



Management Module: Schedules Management

Pending Schedules Add Requests									
Billing Name:	Origin Address:	Destination Address:	Delivery Mode:	Status:	Estimated Delivery Time(days):	Delivery Date:	Unit Price:	Maximum Capacity(kilograms):	
John	Subang Jaya	Johor	2020-11-28	Road Freight	NOT DELIVERED	14	100	10	
Pending Schedules Update Requests									
Delivery ID:	Origin Address:	Destination Address:	Delivery Mode:	Status:	Estimated Delivery Time:				
1274	Subang Jaya	Kuala Lumpur	Air Freight	NOT DELIVERED	3		pending		
Add Schedules				Update Schedules					
ScheduleID	DeliveryDate	DeliveryStatus	BillingName	OriginLocation	DestinationLocation	DeliveryMode	UnitPrice	MaximumCapacity	Estimated Delivery Time
1274	2020-11-28	DELIVERED	Joke	Subang	Kul	Road Freight	0	70	2
1275	2020-11-28	NOT DELIVERED	Joke	2222	2222	Air Freight	0	70	7
1276	2020-11-28	NOT DELIVERED	Joke	3333	3333	Air Freight	0	70	7
1277	2020-11-28	NOT DELIVERED	Joke	4444	4444	Air Freight	0	70	7
1278	2020-11-28	NOT DELIVERED	Joke	4444	4444	Air Freight	0	70	7
1279	2020-11-28	NOT DELIVERED	Joke	4444	4444	Air Freight	0	70	7
1280	2020-11-28	NOT DELIVERED	Joke	Subang Jaya	Johor	Air Freight	0	70	7

Figure 21. The adding and update requests made by the employee.



Management Module: Schedules Management

Pending Schedules Add Requests									
Billing Name:	Origin Address:	Destination Address:	Delivery Mode:	Status:	Estimated Delivery Time(days):	Delivery Date:	Unit Price:	Maximum Capacity(kilograms):	
John	Subang Jaya	Johor	Road Freight	NOT DELIVERED	14	100	10		<button>Approve</button>
Pending Schedules Update Requests									
Delivery ID:	Origin Address:	Destination Address:	Delivery Mode:	Status:	Estimated Delivery Time:				
1274	Subang Jaya	Kuala Lumpur	Air Freight	NOT DELIVERED	3		pending		<button>Approve</button>
Add Schedules					Update Schedules				
ScheduleID	DeliveryDate	DeliveryStatus	BillingName	OriginLocation	DestinationLocation	DeliveryMode	UnitPrice	MaximumCapacity	Estimated Delivery Time
1274	2020-11-28	DELIVERED	Jake	Subang	Kul	Road Freight	0	70	2
1275	2020-11-28	NOT DELIVERED	Jake	2222	2222	Air Freight	0	70	7
1276	2020-11-28	NOT DELIVERED	Jake	3333	3333	Air Freight	0	70	7
1277	2020-11-28	NOT DELIVERED	Jake	4444	4444	Air Freight	0	70	7
1278	2020-11-28	NOT DELIVERED	Jake	4444	4444	Air Freight	0	70	7
1279	2020-11-28	NOT DELIVERED	Jake	4444	4444	Air Freight	0	70	7
1280	2020-11-28	NOT DELIVERED	Jake	Subang Jaya	Johor	Air Freight	0	70	7

Figure 22. The schedules management from the manager's point of view. The manager can approve the requests made by the employee.

Service Management Page

The service management page is where authorized staff will add or update services provided by DHL such as Air, Ocean, Road and Rail Freights. Authorized staff will be able to request for changes or add new services and specify other attributes such as the price, maximum capacity and distance of transit. Only the manager will be able to authorize the request made by the staff.



Management Module: Service Management Module

[Home Dashboard](#)
[Customer Accounts Management](#)
[Delivery Schedule Management](#)
[Inventory Management](#)
[Service Management](#)
[Report Management](#)
[Logout](#)


[Add Service](#) [Update Service](#)

Transportation Type	Price	Distance	Capacity	Foreign Taxation
Air Freight	100	1000	70	0.1
Ocean Freight	50	1000	70	0.2
Road Freight	30	1000	1000	0.1
Rail Freight	80	1000	70	0.1

TransportID	Transport Type	Price	Distance	Capacity	Foreign Taxation

Transportation	Price	Distance	Capacity	ForeignTaxation
Air Freight	100	1000	70	0.1
Ocean Freight	50	1000	70	0.2
Road Freight	30	1000	1000	0.1
Rail Freight	80	1000	70	0.1

Figure 23. The service management page.



Management Module: Service Management Module

[Add Service](#) [Update Service](#)

Transportation Type	Price	Distance	Capacity	Foreign Taxation
Personal Delivery	140	1000	10	3


TransportID	Transport Type	Price	Distance	Capacity	Foreign Taxation
1234	Plane	200	1000	70	0.1

Transportation	Price	Distance	Capacity	ForeignTaxation
Air Freight	100	1000	70	0.1
Ocean Freight	50	1000	70	0.2
Road Freight	30	1000	1000	0.1
Rail Freight	80	1000	70	0.3

Figure 24. The add and update requests made. Only the manager can approve the requests.

Customer Payments Management Page

The customer payments management page is where authorized staff can view and track payments made by the clients. Only the manager or admin will be given the privilege to add or update the records displayed. Staff will be able to search for payment records by specifying the invoice id.



Management Module: Sales Management Module

[Add Record](#) [Update](#)


Search Payment Records

Search InvoiceID:

All Records

PaymentID	InvoiceID	InvoiceNumber	InvoiceDate	OrderID	BillingName	Amount	AccountNo	PaymentType	PaymentDate	TransactionNumber
2334957			2020-11-28		Jaka	100	1111		2020-11-28	SUBANG TO KUL
2334958			2020-11-28		Jaka	100	2222		2020-11-28	2222
2334959			2020-11-28		Jaka	100	3333		2020-11-28	3333
2334960			2020-11-28		Jaka	100	4444		2020-11-28	4444
2334963			2020-11-28		Jaka	100	1234		2020-11-28	Subang to Johor

Figure 25. The Customer payments management page.



Management Module: Sales Management Module

[Add Record](#) [Update](#)

Search Payment Records

Search InvoiceID:

Record found!

PaymentID	InvoiceID	OrderID	InvoiceNumber	InvoiceDate	BillingName	Amount	AccountNo	PaymentType	PaymentDate	TransactionNumber	Comments	Request
2334957				2020-11-28	Jaka	100	1111		2020-11-28		SUBANG TO KUL	1341



All Records

PaymentID	InvoiceID	InvoiceNumber	InvoiceDate	OrderID	BillingName	Amount	AccountNo	PaymentType	PaymentDate	TransactionNumber
2334957			2020-11-28		Jaka	100	1111		2020-11-28	SUBANG TO KUL
2334958			2020-11-28		Jaka	100	2222		2020-11-28	2222
2334959			2020-11-28		Jaka	100	3333		2020-11-28	3333
2334960			2020-11-28		Jaka	100	4444		2020-11-28	4444
2334963			2020-11-28		Jaka	100	1234		2020-11-28	Subang to Johor

Figure 26. The search functionality where the end user can search for payment records based on the invoiceID.



Add Payment Record

Payment ID:	<input type="text"/>
Invoice ID:	<input type="text"/>
Invoice Number:	<input type="text"/>
Invoice Date:	<input type="text" value="mm/dd/yyyy"/> 
Order ID:	<input type="text"/>
Billing Name:	<input type="text" value="e.g. James"/>
Amount:	<input type="text" value="e.g. 3000"/>
AccountNo:	<input type="text"/>
Payment Type:	<input type="text" value="e.g. credit card"/>
Payment Date:	<input type="text" value="mm/dd/yyyy"/> 
Transaction Number:	<input type="text"/>
Comments:	<input type="text"/>
Request Number:	<input type="text"/>
Credit Card Number:	<input type="text"/>
Transport Type:	<input type="text"/>



submit

[Return to Payment Module](#)

Figure 27. The adding of payment records which can only be done by the manager.



Update Payment Record

Payment ID:	<input type="text"/>
Invoice ID:	<input type="text"/>
Invoice Number:	<input type="text"/>
Invoice Date:	<input type="text" value="mm/dd/yyyy"/> 
Order ID:	<input type="text"/>
Billing Name:	<input type="text" value="e.g. James"/>
Amount:	<input type="text" value="e.g. 3000"/>
AccountNo:	<input type="text"/>
Payment Type:	<input type="text" value="e.g. credit card"/>
Payment Date:	<input type="text" value="mm/dd/yyyy"/> 
Transaction Number:	<input type="text"/>
Comments:	<input type="text"/>
Request Number	<input type="text"/>

[Return to Payment Module](#)

Figure 28. The updating of payment records which can only be done by the manager.

Customer Accounts Management Page

The customer accounts management is one of the business functions included in our DHL management module. This page has 2 sub-business functions.

As with all the other pages, there is a navigation menu on the left which lists links to the home screen, other business function modules, and an option to logout as shown in Figure 29. Managers and employees can access the different sub-business functions by using the navigation bar at the centre. Employees can search customer accounts but not approve status updates while managers have access to both business functions.



CustomerID	Title	Name	Email	Phone	Company	Country	PostalCode	City	State	Address	Status	Comments	Change Status
------------	-------	------	-------	-------	---------	---------	------------	------	-------	---------	--------	----------	---------------

Figure 29. Customer Accounts Module Page

1. Search Customer Accounts

Managers and employees can search customer accounts by customer ID or by keyword. The customer ID field is required but the keyword field can be left empty to search for all customer records.

In Figure 29.1, an employee types the customer ID into the input box exactly and submits the search. A single customer record with the searched ID is displayed in a scrollable table format. Certain columns within a row may be empty if the field is optional. The password field is not displayed for security reasons.



Management Module - Customer Accounts Module

[Home Dashboard](#)
[Customer Accounts Management](#)
[Delivery Schedule Management](#)
[Payments Management](#)
[Logout](#)

[Search Customer Accounts](#) [Approve Status Updates \(For Managers\)](#)

Customer ID:

Keyword:

Customer Records:

CustomerID	Title	Name	Email	Phone	Company	Country	PostalCode	City	State	Address	Status	Comments
123		Customer	customer@gmail.com	0123456789	Company	Country	12345	City	State	Address	Untrusted w	Reason

Figure 29.1. Search customer with customer ID "123"

In Figure 29.2, an employee types the keyword "john" into the keyword input box and searches multiple customer records. The keyword search will find any record that has the keyword "john" included in any of the fields. Here, it happens to be that 2 customers with the same name are displayed.



Management Module - Customer Accounts Module

[Home Dashboard](#)
[Customer Accounts Management](#)
[Delivery Schedule Management](#)
[Payments Management](#)
[Logout](#)

[Search Customer Accounts](#) [Approve Status Updates \(For Managers\)](#)

Customer ID:

Keyword:

Customer Records:

CustomerID	Title	Name	Email	Phone	Company	Country	PostalCode	City	State	Address	Status	C
143	Dr.	John	doctorjohn@gmail.com	0123456789		Malaysia	32323	Kuala Lumpur	Selangor	Address	Trusted w	
146		John	john@gmail.com	0123456789		Malaysia	32323	Kuala Lumpur	Selangor	Address	Trusted w	


Figure 29.2. Search customer with keyword "john"

2. Approve Status Updates (For Managers)

Employees cannot edit any of the customers' details but can only change the status of customers. Customer statuses can be "TRUSTED" for trusted customers or "UNTRUSTED" for untrustworthy customers. An extra comments input box is there for employees to provide the reason for the status update.

In Figure 29.3, an employee changes customer status with the customer ID "123" from "Trusted" to "Untrusted" using the combo box and enters the reason in the comments text area. Afterwards, the employee clicks on the "Request for Approval" button and waits for a manager to approve the status update. If there was no change in the status or comments the button does nothing. Figure 29.4 shows the disabled status and comments input fields so that employees

cannot make another status change before the initial one was approved and displays the message “Waiting for Approval” after a customer’s status change was requested.



Management Module - Customer Accounts Module

- [Home Dashboard](#)
- [Customer Accounts Management](#)
- [Delivery Schedule Management](#)
- [Payments Management](#)
- [Logout](#)

Search Customer Accounts
Approve Status Updates (For Managers)

Customer ID: Search

Keyword: Search

Customer Records:

no	Email	Phone	Company	Country	PostalCode	City	State	Address	Status	Comments	Change Status
1	customer@gmail.com	0123456789	Company	Country	12345	City	State	Address	Untrusted w	Reason	Request for Approval

Figure 29.3. Update status to “Untrusted” and comment “reason”



Management Module - Customer Accounts Module

- [Home Dashboard](#)
- [Customer Accounts Management](#)
- [Delivery Schedule Management](#)
- [Payments Management](#)
- [Logout](#)

Search Customer Accounts
Approve Status Updates (For Managers)

Customer ID: Search

Keyword: Search

Customer Records:

no	Email	Phone	Company	Country	PostalCode	City	State	Address	Status	Comments	Change Status
1	customer@gmail.com	0123456789	Company	Country	12345	City	State	Address	Untrusted w		Waiting for Approval

Figure 29.4. Status update “Waiting for Approval”

In Figure 29.5, a manager reviews the request made by an employee or another manager to change the status of a customer. Once reviewed, the manager clicks the approve button to approve the status change, and the original customer record will be updated. Multiple status changes can be made.



Management Module - Customer Accounts Module

[Home Dashboard](#)
[Customer Accounts Management](#)
[Delivery Schedule Management](#)
[Payments Management](#)
[Logout](#)

[Search Customer Accounts](#)

[Approve Status Updates \(For Managers\)](#)

ApprovalID	StaffName	CustomerID	DateTime	Status	Comments	
17	Jale	123	2020-11-21 13:45:57	UNTRUSTED	reason	<input type="button" value="Approve"/>

Figure 29.5.Approve Status Updates (For Managers)

PhpMyAdmin MySQL Database View:

The screenshot displays the PhpMyAdmin interface for a MySQL database. The left sidebar shows a tree view of the database structure, including tables like 'group_assignment', 'approvals', 'checking_of_service_and_status', 'customers', 'delivery_schedule', 'payments', 'request', 'services', 'staff', 'information_schema', 'mysql', 'performance_schema', 'phpmyadmin', and 'test'. The main panel shows the 'approvals' table structure and data.

Database: group_assignment > Table: approvals

Showing rows 0 / 2 (2 total; Query took 0.0194 seconds)

SELECT * FROM `approvals`

Options: Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

	ApprovalID	StaffName	CustomerID	DateTime	Status	Comments	Approved
<input type="checkbox"/>	37	Jake	124	2020-11-24 14:42:58	TRUSTED	123	0
<input type="checkbox"/>	38	Jos Kane	125	2020-11-30 14:55:51	TRUSTED	missed payment	1
<input type="checkbox"/>	39	Jake	123	2020-11-30 15:00:05	UNTRUSTED	missed payment	1

Query result operations: Print | Copy to clipboard | Export | Display chart | Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark