



UNIVERSITI
TEKNOLOGI
PETRONAS

TFB1033

OBJECT ORIENTED PROGRAMMING

MAY 2024

PARCEL HUB SYSTEM

LECTURER:

DR NORDIN ZAKARIA

No	GROUP MEMBERS	STUDENT ID	COURSE
1.	MUHAMMAD AMIER IRFAN BIN MUHAMMAD ALI JR	22006313	INFORMATION TECHNOLOGY
2.	FARHAN BIN IZAM FAIRUS	22006657	INFORMATION TECHNOLOGY
3.	MUHAMMAD ASHRAF BIN HARRIS	22001716	INFORMATION TECHNOLOGY
4.	BAT'RISYIA DIYANAH BINTI FADIL SANUSI	22011685	INFORMATION TECHNOLOGY
5.	MIRZA IMRAN BIN BAHARIN	22005917	COMPUTER ENGINEERING

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Project Overview

The Parcel Hub System is designed to simplify the process of tracking and retrieving parcels for users at the University Technology Petronas parcel hub. The system's objectives are to reduce waiting times, increase efficiency and offer additional services such as payment processing and point collection for promotions.

Objectives:

- Allow user to track their parcels easily.
- Shorten waiting times at the parcel hub.
- Enable users to make payments via the system.
- Allow users to collect points for future promotions.
- Help parcel hub staff manage parcels more effectively by giving real-time updates on parcel availability.
- Decrease the quantity of unclaimed parcels.

Expected results:

- User can enter their tracking number and parcel size to receive real-time updates.
- Shorter lineups at the parcel hub.
- Improved time efficiency for both users and staff.
- Improved management of parcels by staff, knowing when parcels are prepared for pick-up.
- Reduction in unclaimed parcels.

Project Justification:

- Current parcel hub systems are slow, causing long wait times.
- Limited storage space for the influx of daily parcels due to unclaimed items.
- The new system aims to address these issues by offering a more efficient and user-friendly solution.

Originality:

- The Parcel Hub Systems is an original project specifically tailored for the University Technology Petronas parcel hub.

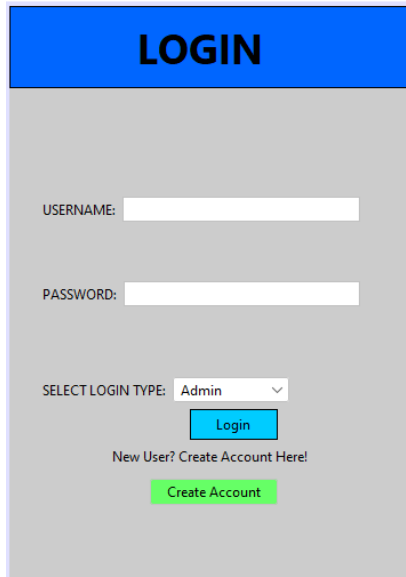
Special Features:

- Focuses on solving the specific problems faced by the university parcel hub staff.
- Contains login and signup pages for staff, students and guests.
- Streamlines the process for staff by allowing them to scan student's matric cards for payments.
- Automatically returns parcels to the seller if not collected within the pickup time, reducing overcrowding.
- Provides staff with tools to monitor profits, successful and failed parcel deliveries and user statistic.

The Parcel Hub System is designed to enhance the efficiency and user experience at the University Technology Petronas parcel hub. By addressing the current challenges and implementing innovative features, the project seeks a smoother workflow for staff and improve user satisfaction.

PROJECT GUI

1. Login interface

A screenshot of a web login interface. At the top is a blue header bar with the word "LOGIN" in white, bold, uppercase letters. Below the header is a light gray rectangular area containing the login form. The form includes a "USERNAME:" label followed by a white text input field. Below that is a "PASSWORD:" label followed by a white text input field. Under the password field is a "SELECT LOGIN TYPE:" label followed by a dropdown menu showing "Admin" with a downward arrow. Below the dropdown is a blue "Login" button. At the bottom of the form area, there is a link that says "New User? Create Account Here!" followed by a green "Create Account" button.

LOGIN

USERNAME:

PASSWORD:

SELECT LOGIN TYPE: Admin ▾

[Login](#)

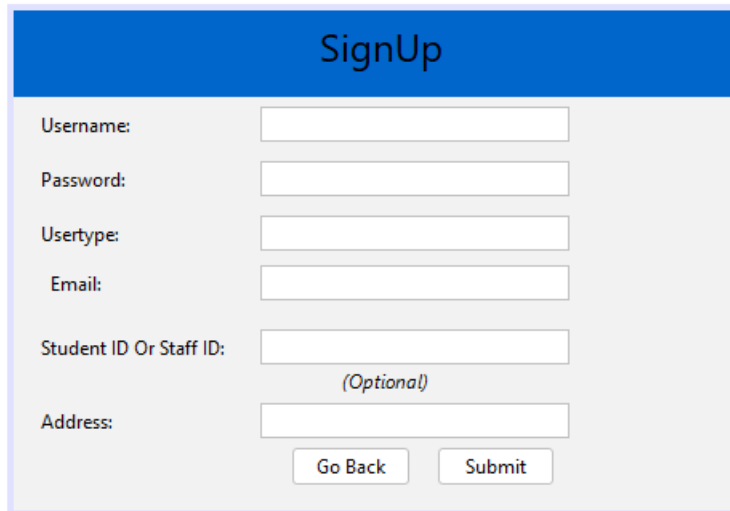
New User? [Create Account Here!](#)

[Create Account](#)

Explanation:

The login interface allows users (students and staff) to access the system. Users must provide their login information to authenticate and gain access to their respective functionalities within the system.

2. Sign Up interface



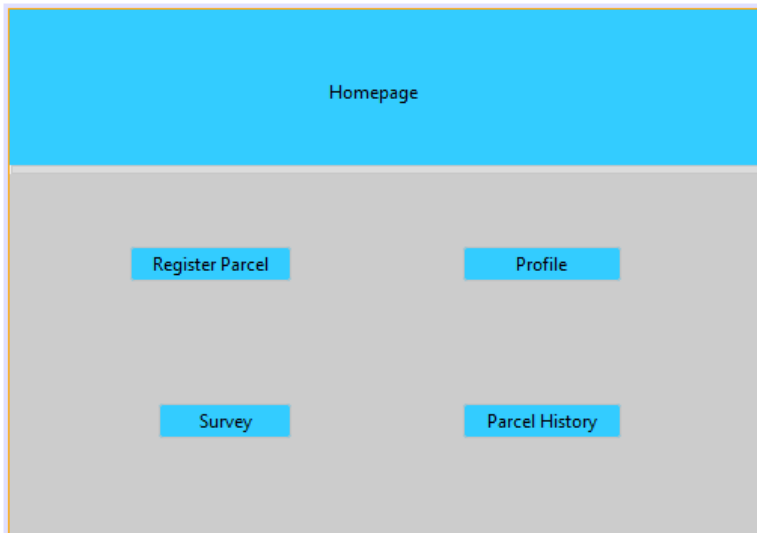
The image shows a web form titled "SignUp" with a blue header. The form is set against a light gray background and contains several input fields for user registration. The fields are labeled "Username:", "Password:", "Usertype:", "Email:", "Student ID Or Staff ID:", and "Address:". The "Student ID Or Staff ID:" field has a note "(Optional)" below it. At the bottom of the form are two buttons: "Go Back" and "Submit".

SignUp	
Username:	<input type="text"/>
Password:	<input type="text"/>
Usertype:	<input type="text"/>
Email:	<input type="text"/>
Student ID Or Staff ID:	<input type="text"/>
	(Optional)
Address:	<input type="text"/>
<input type="button" value="Go Back"/> <input type="button" value="Submit"/>	

Explanation:

The sign-up interface is designed for new users to create an account. Users register in the system by entering the required information, which includes their name, email address, password, and user type (staff or student).

3. User Homepage (Usertype: User)



Explanation:

The user homepage serves as the main dashboard for logged-in users. It provides an overview of the user's account, along with parcel tracking status, notifications, and quick access to other features including payment and parcel registration.

4. User Parcel History (Usertype: User)

Parcel History				
Home	Date	Tracking Number	Size Parcel	Successful ?
Register Parcel				<input type="checkbox"/>
Survey				<input type="checkbox"/>
Profile				<input type="checkbox"/>
Parcel History				<input type="checkbox"/>
Logout				

Explanation:

The parcel history interface displays a list of parcels associated with the user. It includes information such as tracking number, parcel size, status updates, and delivery history, enabling users to keep track of their parcels.

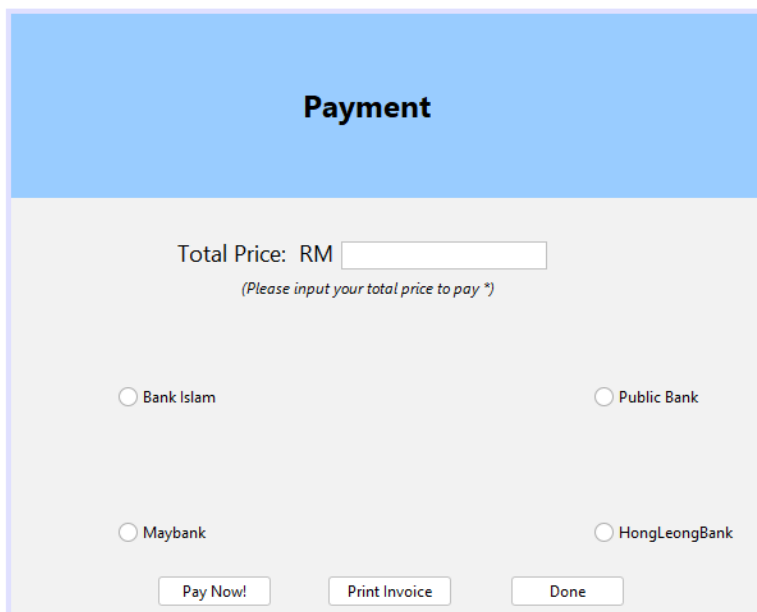
5. User Register Parcel (Usertype: User)

The screenshot shows a web application interface for registering a parcel. At the top, a blue banner contains the text "Register Parcel Here !!!". Below this is a sidebar with a light blue background containing several buttons: "Home", "Register Parcel" (which is highlighted), "Survey", "Profile", "Parcel History", and "Logout". The main content area has a light gray background and contains the following elements: a label "Tracking Number :" followed by a text input field; a label "Size of Prcel" followed by a dropdown menu currently showing "Size S (RM 1)"; and two buttons, "Search" and "Proceed", positioned below the dropdown.

Explanation:

The user register parcel interface is for user to track their parcel. The user register parcel interface displays a tracking number for user to fill in, the size of their parcel, search button and proceed button to track user's parcel.

6. User Payment (Usertype: User)

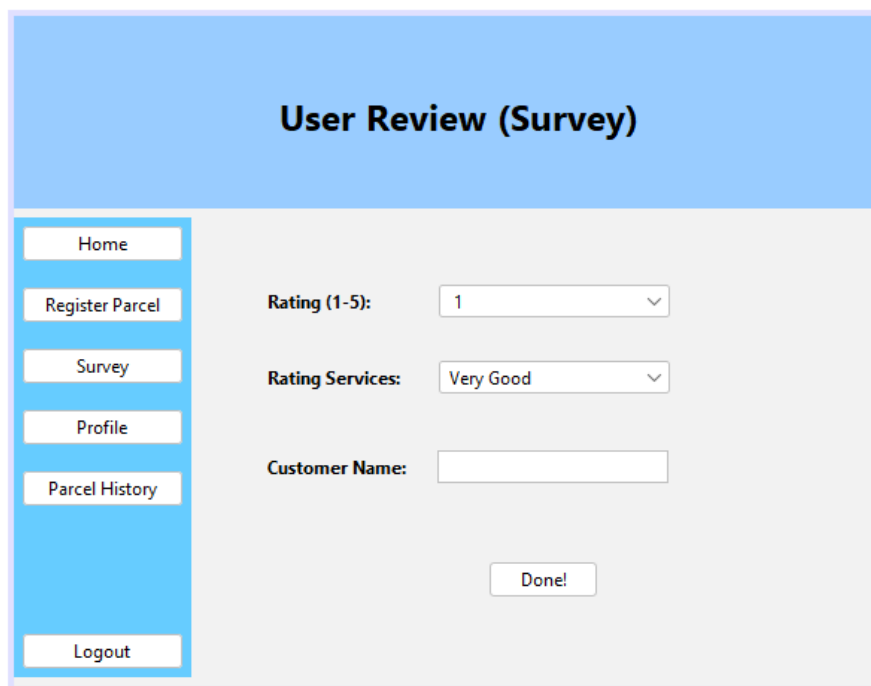


The screenshot shows a web form titled "Payment" with a blue header. Below the header, there is a text input field for "Total Price: RM" with a placeholder instruction "(Please input your total price to pay *)". Below this, there are four radio button options for bank selection: "Bank Islam", "Public Bank", "Maybank", and "HongLeongBank". At the bottom of the form, there are three buttons: "Pay Now!", "Print Invoice", and "Done".

Explanation:

The user payment interface is for the user to fill in the exact total price to pay for the service. The user payment interface displays total price for user to fill in, types of banks to choose, pay now button for user to pay immediately, print invoice button for the payment receipt and done button.

7. User Review (Usertype: User)



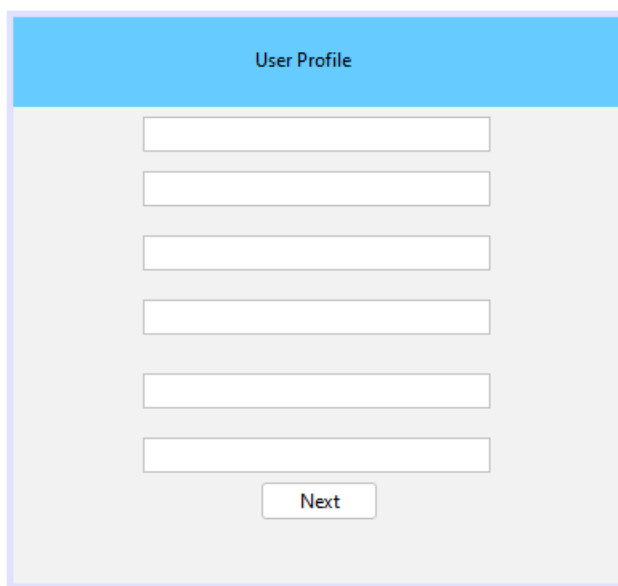
The image shows a web interface for a 'User Review (Survey)'. It features a light blue header with the title 'User Review (Survey)'. On the left is a vertical sidebar with buttons for 'Home', 'Register Parcel', 'Survey', 'Profile', 'Parcel History', and 'Logout'. The main content area is light gray and contains three form fields: 'Rating (1-5)' with a dropdown menu showing '1', 'Rating Services' with a dropdown menu showing 'Very Good', and 'Customer Name' with a text input field. A 'Done!' button is located at the bottom center of the form area.

User Review (Survey)	
Home	Rating (1-5): 1
Register Parcel	Rating Services: Very Good
Survey	Customer Name:
Profile	
Parcel History	
Logout	Done!

Explanation:

The user review interface is for user to enter their feedback for the service. The user review interface displays rating, rating services and customer name for customer to fill in theirs.

8. User Profile (Usertype : User)

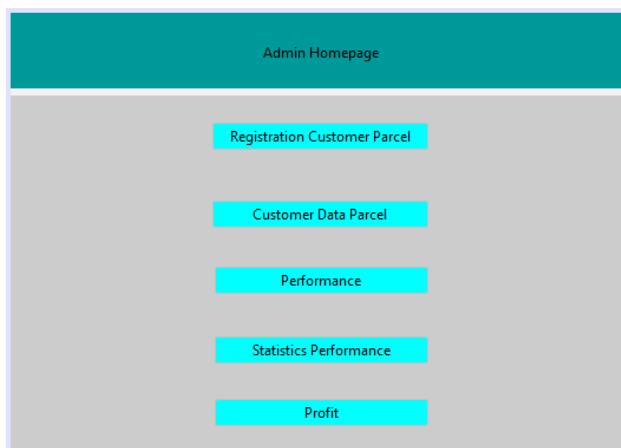


The image shows a user profile form interface. It has a blue header bar with the text "User Profile". Below the header, there are six white input fields stacked vertically. At the bottom of the form, there is a button labeled "Next".

Explanation:

The user profile interface will show profile and details of user after they registered. The user profile will display username, password, usertype, email, student id and address.

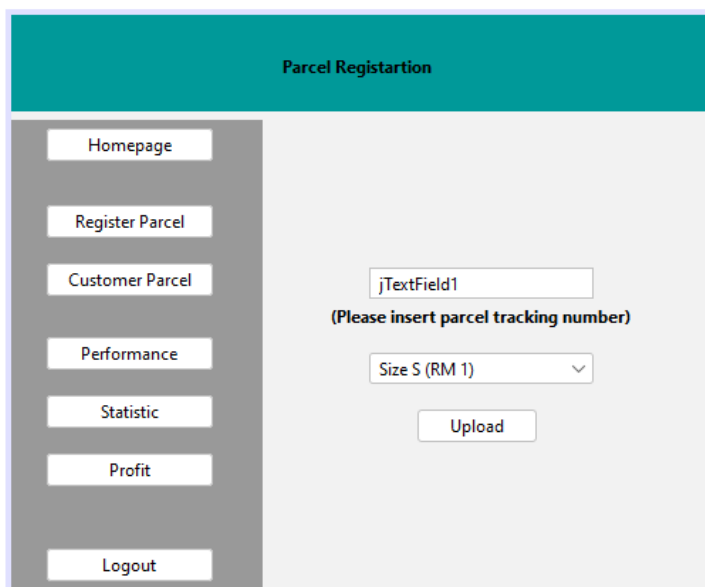
9. Admin Homepage (Usertype: Admin)



Explanation:

The admin homepage interface is for admin view the data for the service. The admin homepage interface displays registration customer parcel, customer data parcel, performance, statistics performance, and profit.

10. Admin Parcel Registration (Usertype: Admin)



The screenshot shows a web application interface for "Parcel Registration". It features a teal header bar with the title "Parcel Registration". On the left, there is a vertical sidebar with buttons for "Homepage", "Register Parcel", "Customer Parcel", "Performance", "Statistic", "Profit", and "Logout". The main content area is light gray and contains a text input field labeled "jTextField1" with the instruction "(Please insert parcel tracking number)" below it. Underneath the text field is a dropdown menu currently showing "Size S (RM 1)". At the bottom of the form is an "Upload" button.

Explanation:

The admin parcel registration interface is for admin to register parcel into the system. The admin parcel registration interface displays text field to fill the tracking number, size option for the parcel and upload button.

11. Admin Profit (Usertype: Admin)

Title 1	Title 2
---------	---------

Total Profit Receive: RM

Display

Explanation:

The admin profit interface is for the admin to know the profit they get. The admin profit interface shows list of the parcel registered, total profit receives in ringgit Malaysia and display button.

12. Admin Performance (Uertype: Admin)

Performance (KPI)		
Rating (1-5)	Rating Services	Customer Name
<div> <div>Homepage</div> <div>Register Parcel</div> <div>Customer Parcel</div> <div>Performance</div> <div>Statistic</div> <div>Profit</div> <div>Logout</div> </div>		
<div>Display</div>		

Explanation:

The admin performance interface is for admin to know the feedback they receive from user. The admin performance interface displays rating, rating services, customer name and display button.

13. AdminCustomerParcel (Usertype:Admin)

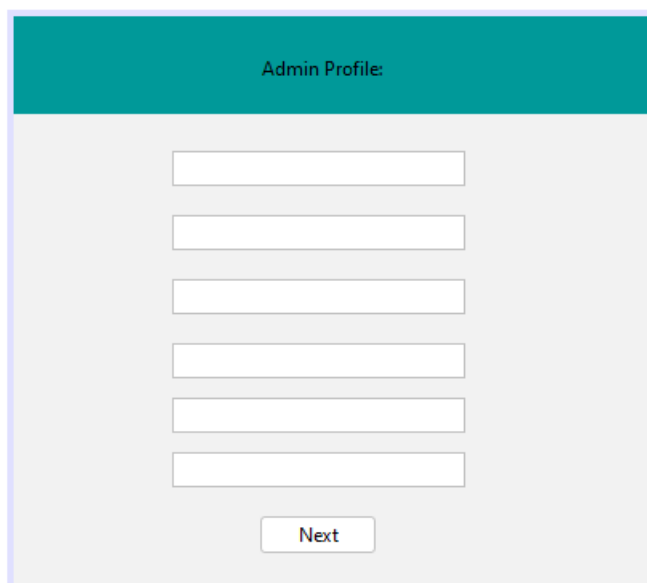
The screenshot shows a web application interface for 'Customers Parcel'. It features a teal header bar with the title 'Customers Parcel'. On the left is a grey sidebar with buttons for 'Homepage', 'Register Parcel', 'Customer Parcel', 'Performance', 'Statistic', 'Profit', and 'Logout'. The main content area contains a table with two columns: 'Tracking Number' and 'Size Of Parcel'. The table body is currently empty. At the bottom right of the main area is a 'Display Data' button.

Tracking Number	Size Of Parcel
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Explanation:

The display button data will collect all the tracking number and the size of parcel from the adminParcelRegistration database and will be displayed in the table above.

14. Admin Profile: (Usertype : Admin)



The image shows a web form titled "Admin Profile:" in a teal header. Below the header, there are six white rectangular input fields stacked vertically on a light gray background. At the bottom of the form, there is a "Next" button.

Explanation:

The admin profile interface will show profile and details of admin after they registered. The admin profile will display username, password, usertype, email, student id or staff id and address.

UML Diagram

