

# Courier Service System

TECHTURTLES

**Presented By**

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# About Us

We are committed to make  
this project.

We are all 2nd Year Data  
Engineering students taking  
Data Structure and Algorithm,  
with all of us passionate to  
present this project to all of you.



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- 4 Implementation



# Objective

**Our project is aiming:**

To utilize a stack and queue operations to manage packages, the administrator can add new packages with information like the tracking number, address, sender, recipient, category, and delivery status, among other tasks, using the system. The system also uses stack and queue operations to delete a package.



# Overview



- WE USE STACK AND QUEUE OPERATIONS IN OUR PROJECT. OUR PROJECT IS MAINLY ABOUT MANAGING PARCELS IN COURIER SERVICE.
- FOR RETRIEVING A LIST OF PARCELS, WE USE FILE OPERATIONS BY IMPORTING A TXT FILE NAMED "**PARCEL DATA.TXT**".
- FOR **STACK OPERATIONS**, WE SIMPLY USE THE **PUSH** FUNCTION TO ADD A NEW PARCEL INTO THE SYSTEM. FOR DELETING AN UNNECESSARY PARCEL, WE APPLY THE **POP** FUNCTION.
- FOR **QUEUE OPERATIONS**, WE SIMPLY USE THE **ENQUEUE** FUNCTION TO ADD A NEW PARCEL INTO THE SYSTEM. FOR DELETING AN UNNECESSARY PARCEL, WE APPLY THE **DEQUEUE** FUNCTION.



# Adding a Parcel



When the administrator is using stack operations to add a new parcel, the new parcel will be “pushed” at the top of the list. Then, when the user is using queue operations, the new parcel will be added at the back of the list.

# Removing a Parcel



Administrators can delete existing parcels using either stack or queue operations. When the user is using stack operations to delete an existing parcel, the parcel will be “popped” from the top of the list. Then, when the user is using queue operations, the parcel will be removed from the front of the list.

# User Guide

To understand better, let's dive in  
our system functionality.



# Main Menu

- Main Menu have 3 options:  
stack operations, queue  
operations and exiting the  
program.
- Case 1 chosen

```
+-----+  
| Courier Service System Menu |  
+-----+  
| 1. Parcel using Implementation of Stack |  
| 2. Parcel using Implementation of Queue |  
| 3. Exit |  
+-----+  
  
Enter your choice: 1
```

# Stack Operations

- Stack Implementation have 4 options: adding a new parcel at the top of stack, removing a parcel from the top of stack, display lists of parcels and exiting the program.
- Case 1 chosen

```
+-----+
| Courier Service System Menu |
+-----+
| 1. Add a new parcel
| 2. Delete a parcel
| 3. Display all parcels
| 4. Exit
+-----+

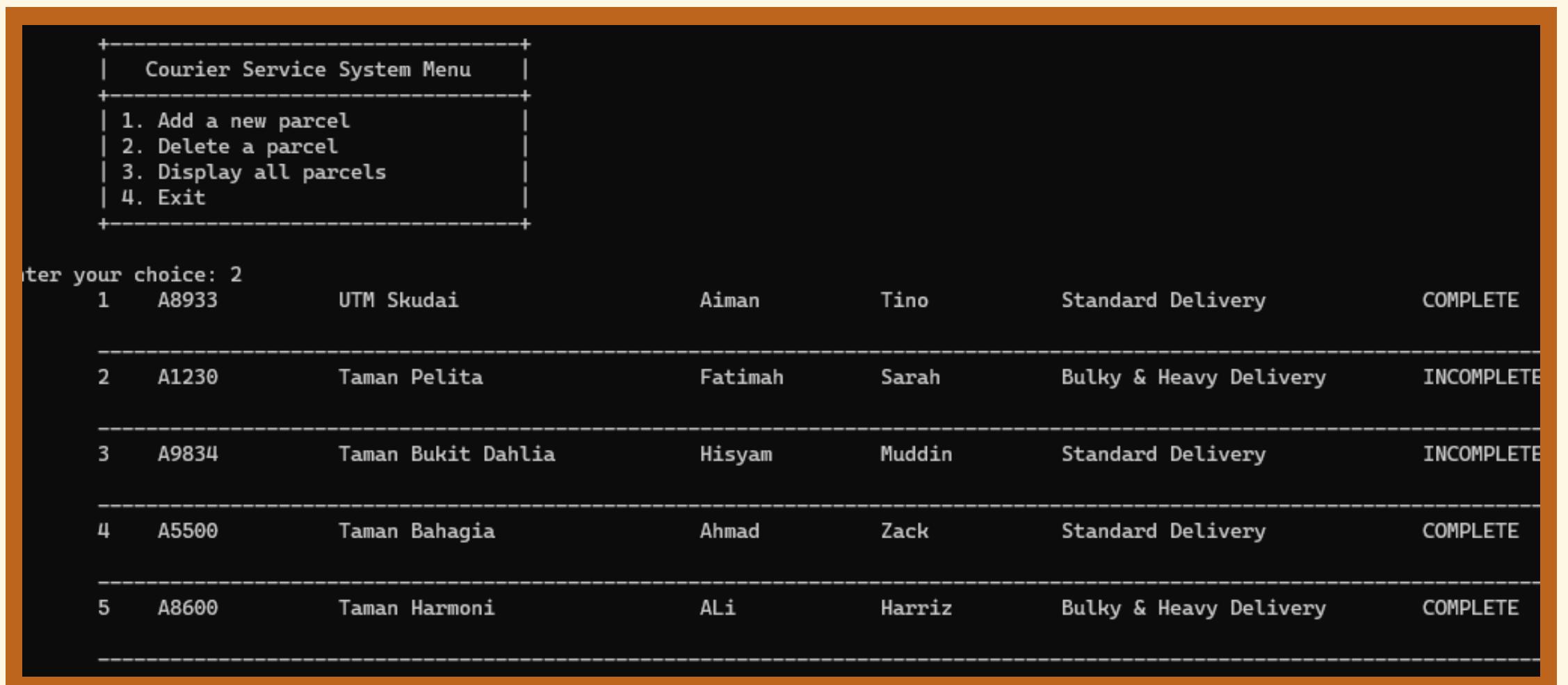
Enter your choice: 1

Enter parcel details:
Tracking Number: YD724
Address: Jalan Orkid
Sender's Name: Hakim
Receiver's Name: Safwan

A: Bulky & Heavy Delivery  B: Standard Delivery
Shipping Option (A/B): A
Status Delivery (0 for Complete, 1 for Incomplete): 0
  1   YD724           Jalan Orkid          Hakim        Safwan      Bulky & Heavy Delivery    COMPLETE
  -----
  2   A8933           UTM Skudai         Aiman        Tino       Standard Delivery    COMPLETE
  -----
  3   A1230           Taman Pelita       Fatimah     Sarah      Bulky & Heavy Delivery    INCOMPLETE
  -----
  4   A9834           Taman Bukit Dahlia  Hisyam      Muddin     Standard Delivery    INCOMPLETE
  -----
  5   A5500           Taman Bahagia     Ahmad       Zack      Standard Delivery    COMPLETE
  -----
  6   A8600           Taman Harmoni    ALi        Harriz     Bulky & Heavy Delivery    COMPLETE
  -----
```

# Stack Operations

- Stack Implementation have 4 options: adding a new parcel at the top of stack, removing a parcel from the top of stack, display lists of parcels and exiting the program.
- Case 2 chosen



The screenshot shows a terminal window titled "Courier Service System Menu". The menu lists four options: 1. Add a new parcel, 2. Delete a parcel, 3. Display all parcels, and 4. Exit. Below the menu, the user has entered choice 2. The table displays five parcels in a stack:

Parcel ID	Delivery Address	Delivery Person	Delivery Type	Status
1 A8933	UTM Skudai	Aiman	Standard Delivery	COMPLETE
2 A1230	Taman Pelita	Fatimah	Bulky & Heavy Delivery	INCOMPLETE
3 A9834	Taman Bukit Dahlia	Hisyam	Standard Delivery	INCOMPLETE
4 A5500	Taman Bahagia	Ahmad	Standard Delivery	COMPLETE
5 A8600	Taman Harmoni	ALi	Bulky & Heavy Delivery	COMPLETE

# Stack Operations

- Stack Implementation have 4 options: adding a new parcel at the top of stack, removing a parcel from the top of stack, display lists of parcels and exiting the program.
- Case 3 chosen

The screenshot shows a terminal window with a yellow header bar. The header bar contains a logo of a stylized bird in flight above a sun-like shape, with the text "COURIER SERVICE SYSTEM" on the left and "Version 1.0" on the right. Below the header is a menu box with a black border and white text. The menu box contains the title "Courier Service System Menu" and four numbered options: 1. Add a new parcel, 2. Delete a parcel, 3. Display all parcels, and 4. Exit. To the right of the menu box is a table of parcel deliveries. The table has a black header row with columns for Parcel ID, Destination, Driver, Assistant, Delivery Type, and Status. The body of the table contains five rows of data, each representing a different parcel. Row 1: Parcel ID A8933, Destination UTM Skudai, Driver Aiman, Assistant Tino, Delivery Type Standard Delivery, Status COMPLETE. Row 2: Parcel ID A1230, Destination Taman Pelita, Driver Fatimah, Assistant Sarah, Delivery Type Bulky & Heavy Delivery, Status INCOMPLETE. Row 3: Parcel ID A9834, Destination Taman Bukit Dahlia, Driver Hisyam, Assistant Muddin, Delivery Type Standard Delivery, Status INCOMPLETE. Row 4: Parcel ID A5500, Destination Taman Bahagia, Driver Ahmad, Assistant Zack, Delivery Type Standard Delivery, Status COMPLETE. Row 5: Parcel ID A8600, Destination Taman Harmoni, Driver ALi, Assistant Harriz, Delivery Type Bulky & Heavy Delivery, Status COMPLETE.

Courier Service System						
Version 1.0						
Courier Service System Menu						
1. Add a new parcel 2. Delete a parcel 3. Display all parcels 4. Exit						
Parcel ID	Destination	Driver	Assistant	Delivery Type	Status	
1 A8933	UTM Skudai	Aiman	Tino	Standard Delivery	COMPLETE	
2 A1230	Taman Pelita	Fatimah	Sarah	Bulky & Heavy Delivery	INCOMPLETE	
3 A9834	Taman Bukit Dahlia	Hisyam	Muddin	Standard Delivery	INCOMPLETE	
4 A5500	Taman Bahagia	Ahmad	Zack	Standard Delivery	COMPLETE	
5 A8600	Taman Harmoni	ALi	Harriz	Bulky & Heavy Delivery	COMPLETE	

# Stack Operations

- Stack Implementation have 4 options: adding a new parcel at the top of stack, removing a parcel from the top of stack, display lists of parcels and exiting the program.
- Case 4 chosen

```
+-----+
| Courier Service System Menu |
+-----+
| 1. Add a new parcel
| 2. Delete a parcel
| 3. Display all parcels
| 4. Exit
+-----+
Enter your choice: 4
Exiting program.
```

# Main Menu

- Main Menu have 3 options:  
stack operations, queue  
operations and exiting the  
program.
- Case 2 chosen

```
+-----+  
| Courier Service System Menu |  
+-----+  
| 1. Parcel using Implementation of Stack |  
| 2. Parcel using Implementation of Queue |  
| 3. Exit |  
+-----+  
  
Enter your choice: 2|
```

# Queue Operations

- Stack Implementation have 4 options: adding a new parcel at the back of queue, removing a parcel from the front of queue, display lists of parcels and exiting the program.
- Case 1 chosen

```
+-----+
| Courier Service System Menu |
+-----+
| 1. Add a new parcel
| 2. Delete a parcel
| 3. Display all parcels
| 4. Exit
+-----+

Enter your choice: 1

Enter parcel details:
Tracking Number: YE713
Address: Bukit Kota
Sender's Name: Azhar
Receiver's Name: Danial

A: Bulky & Heavy Delivery B: Standard Delivery
Shipping Option (A/B): B
Status Delivery (0 for Complete, 1 for Incomplete): 1

1 A8600 Taman Harmoni ALi Harriz Bulky & Heavy Delivery COMPLETE
-----
2 A5500 Taman Bahagia Ahmad Zack Standard Delivery COMPLETE
-----
3 A9834 Taman Bukit Dahlia Hisyam Muddin Standard Delivery INCOMPLETE
-----
4 A1230 Taman Pelita Fatimah Sarah Bulky & Heavy Delivery INCOMPLETE
-----
5 A8933 UTM Skudai Aiman Tino Standard Delivery COMPLETE
-----
6 YE713 Bukit Kota Azhar Danial Standard Delivery INCOMPLETE
```

# Queue Operations

- Stack Implementation have 4 options: adding a new parcel at the back of queue, removing a parcel from the front of queue, display lists of parcels and exiting the program.
- Case 2 chosen

Courier Service System Menu						
1. Add a new parcel 2. Delete a parcel 3. Display all parcels 4. Exit						
Enter your choice: 2						
1	A5500	Taman Bahagia	Ahmad	Zack	Standard Delivery	COMPLETE
2	A9834	Taman Bukit Dahlia	Hisyam	Muddin	Standard Delivery	INCOMPLETE
3	A1230	Taman Pelita	Fatimah	Sarah	Bulky & Heavy Delivery	INCOMPLETE
4	A8933	UTM Skudai	Aiman	Tino	Standard Delivery	COMPLETE
5	YE713	Bukit Kota	Azhar	Danial	Standard Delivery	INCOMPLETE

# Queue Operations

- Stack Implementation have 4 options: adding a new parcel at the back of queue, removing a parcel from the front of queue, display lists of parcels and exiting the program.
- Case 3 chosen

Courier Service System Menu						
1. Add a new parcel 2. Delete a parcel 3. Display all parcels 4. Exit						
Enter your choice: 3						
1	A5500	Taman Bahagia	Ahmad	Zack	Standard Delivery	COMPLETE
2	A9834	Taman Bukit Dahlia	Hisyam	Muddin	Standard Delivery	INCOMPLETE
3	A1230	Taman Pelita	Fatimah	Sarah	Bulky & Heavy Delivery	INCOMPLETE
4	A8933	UTM Skudai	Aiman	Tino	Standard Delivery	COMPLETE
5	YE713	Bukit Kota	Azhar	Danial	Standard Delivery	INCOMPLETE

# Queue Operations

- Stack Implementation have 4 options: adding a new parcel at the back of queue, removing a parcel from the front of queue, display lists of parcels and exiting the program.
- Case 4 chosen

```
+-----+
| Courier Service System Menu |
+-----+
| 1. Add a new parcel
| 2. Delete a parcel
| 3. Display all parcels
| 4. Exit
+-----+
Enter your choice: 4
Exiting program.
```

# Main Menu

- Main Menu have 3 options:  
stack operations, queue  
operations and exiting the  
program.
- Case 3 chosen

```
+-----+  
| Courier Service System Menu |  
+-----+  
| 1. Parcel using Implementation of Stack |  
| 2. Parcel using Implementation of Queue |  
| 3. Exit |  
+-----+  
  
Enter your choice: 3  
  
Exiting program.
```



# The End

**We really appreciate your time  
and focus to our presentation.  
Thank you!**