



**COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS,
UNIVERSITI TEKNOLOGI MARA,
MERBOK, KEDAH**

DIPLOMA IN LIBRARY INFORMATICS (CDIM144)

PROGRAMMING FOR LIBRARIES (IML207)

“COURIER SYSTEM: PARCEL BILL”

PREPARED BY:

SITI AISYAH NATASHA BINTI SOPHIAN (2022677088)

CLASS: KCDIM1443F

PREPARED FOR:

SIR AIRUL SHAZWAN BIN NORSHAHIMI

SUBMISSION DATE:

WEEK 12

“COURIER SYSTEM: PARCEL BILL

PREPARED BY:

SITI AISYAH NATASHA BINTI SOPHIAN (2022677088)

**COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS,
UNIVERSITI TEKNOLOGI MARA,
MERBOK, KEDAH**

SUBMISSION DATE:

Week 12

TABLE OF CONTENT

1.0 INTRODUCTION..... 1

 1.1 PROBLEM STATEMENT 1

 1.2 OBJECTIVE 1

2.0 FLOW CHART 2

3.0 SNAPSHOT OF CODE 3-4

4.0 SNAPSHOT OF GUI 5

5.0 SNAPSHOT OF DATABASE 6



STUDENT PLEDGE OF ACADEMIC INTEGRITY

As a student of Universiti Teknologi MARA (UiTM), it is my responsibility to act in accordance with UiTM's academic assessment and evaluation policy. I hereby pledge to act and uphold academic integrity and pursue scholarly activities in UiTM with honesty and responsible manner. I will not engage or tolerate acts of academic dishonesty, academic misconduct, or academic fraud including but not limited to:

- a. **Cheating:** Using or attempt to use any unauthorized device, assistance, sources, practice or materials while completing academic assessments. This include but not limited to copying from another, allowing others to copy, unauthorized collaboration on an assignment or open book tests, or engaging in any act or conduct that can be construed as cheating.
- b. **Plagiarism:** Using or attempts to use the work of others (ideas, design, words, art, music, etc.) without acknowledging the source; using or purchasing materials prepared by another person or agency or engaging in other behavior that a reasonable person would consider as plagiarism.
- c. **Fabrication:** Falsifying data, information, or citations in any academic assessment and evaluation.
- d. **Deception:** Providing false information with intend to deceive an instructor concerning any academic assessment and evaluation.
- e. **Furnishing false information:** Providing false information or false representation to any UiTM official, instructor, or office.

With this pledge, I am fully aware that I am obliged to conduct myself with utmost honesty and integrity. I fully understand that a disciplinary action can be taken against me if I, in any manner, violate this pledge.

Name : SITI AISYAH NATASHA BINTI SOPHIAN
Matric Number : 2022677088
Course Code : IML208
Programme Code :-
Faculty / Campus : UiTM Kampus Sungai Petani

ACKNOWLEDGEMENTS

First and foremost, I would like to express my greatest gratitude to Mr Airul Shazwan for his guidance throughout this journey. I was given guidelines on how to do this individual assignment in subject Programming for Libraries for my third semester of Diploma in Information Management. A special gratitude to my respected lecturer for giving me a very clear and concise instructions to make it easier for me to proceed this report smoothly, also assisted on encouragement and guidance to finally make this assignment succeed without exceeding its due date.

A very huge thank you to my beloved classmates in KCDIM1443F class for giving each other cooperation and support while I was working on this assignment for this subject.

For that matter, I am able to try to put my best effort throughout the completion of this assignment. Once again, I would like to thank everyone for the time, energy and commitment.

1.0 INTRODUCTION OF COURIER PARCEL BILL SYSTEM

This project called “Courier Parcel Bill System” was created to automate and simplify the process of figuring out how much a courier service will cost.

1.1 PROBLEM STATEMENT

Manual and error-prone parcel bill calculation methods are a major cause of operational inefficiencies, billing errors, and dissatisfied consumers. When a courier parcel bill calculation system isn't automated, the following happens:

- **Inaccuracies and Disputes:** Determining shipping costs by hand raises the possibility of errors, which in turn causes billing disputes and erodes customer confidence and satisfaction.
- **Lack of Adaptability:** Without a centralized system, courier companies struggle to adapt to dynamic market conditions, and evolving customer demands, limiting their ability to stay competitive in the industry.

1.2 OBJECTIVE

- **Automation:** Streamline and automate the complex process of calculating courier parcel bills to reduce manual errors and enhance operational efficiency.
- **Adaptability:** Provide a flexible and customizable system that adapts to various pricing structures, and shipping options, meeting the diverse needs of courier companies.

2.0 FLOW CHART

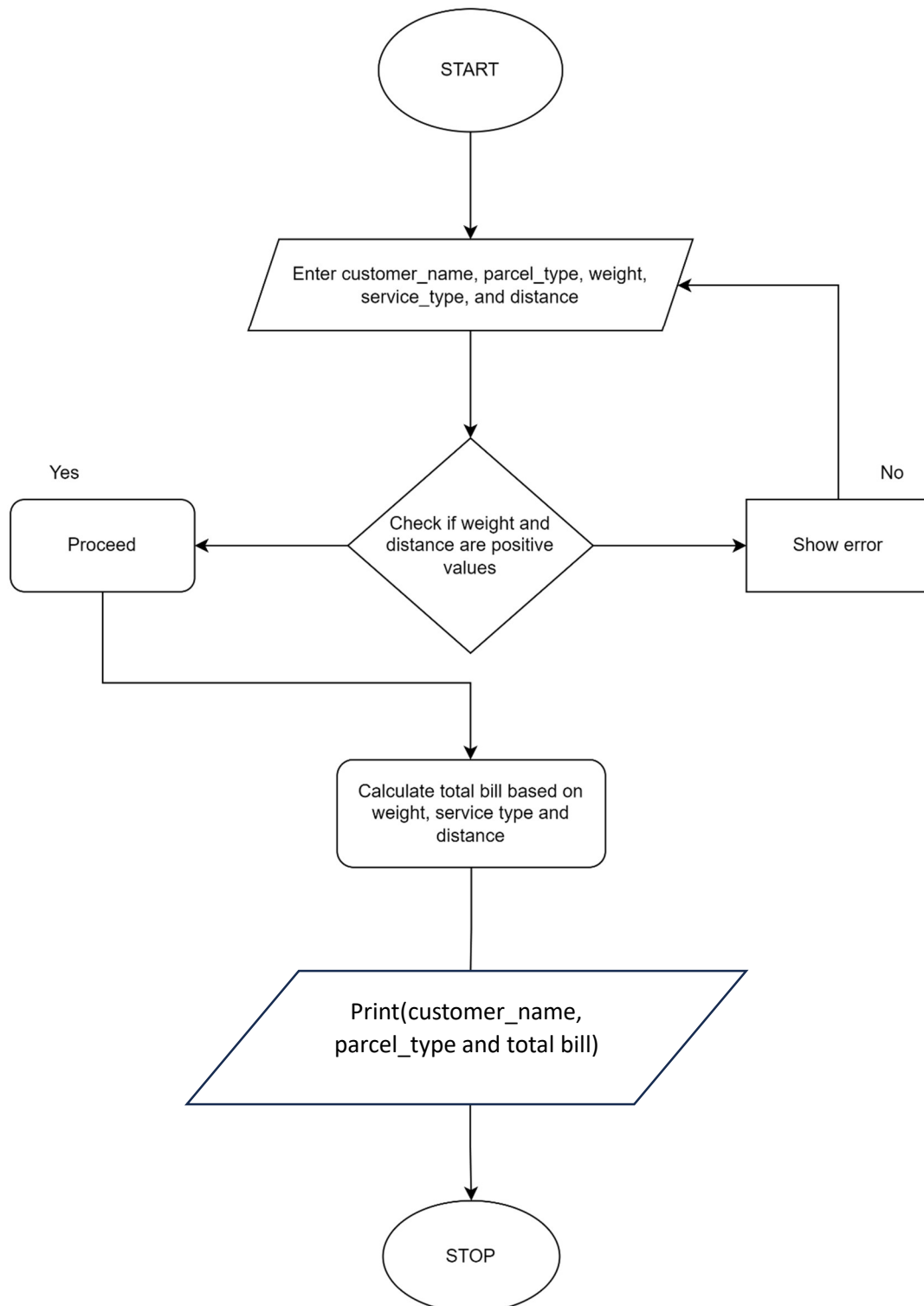


Figure 1 Parcel bill Flowchart

3.0 SNAPSHOT OF CODE

```
1 import tkinter
2 from tkinter import ttk
3 from tkinter import messagebox
4 import mysql.connector
5
6 def parcel_bill():
7     customer_name = customer_name_var.get()
8     parcel_type = parcel_type_var.get()
9     weight = float(weight_entry.get())
10    service_type = service_type_var.get()
11    distance = float(distance_entry.get())
12
13    weight_per_kg = {
14        "envelope": 0.1,
15        "small box": 0.5,
16        "medium box": 1,
17        "large box": 2
18    }
19    price_per_kg = {
20        "envelope": 5,
21        "small box": 6,
22        "medium box": 12,
23        "large box": 15
24    }
25    service_cost = {
26        "express": 10,
27        "standard": 4.50
28    }
29
30    weight_cost = price_per_kg[parcel_type] * weight
31    service_cost = service_cost[service_type]
32    distance_cost = distance * weight_per_kg[parcel_type]
33    total_bill = weight_cost + service_cost + distance_cost
34
35    print("Customer Name: {customer_name}")
36    print("Parcel Type: {parcel_type}")
37
38    total_bill_var.set("Total Bill: RM {total_bill:.2f}")
39    total_bill_label.config(textvariable=total_bill_var)
40
41    # Connect to MySQL database
42    mydb = mysql.connector.connect(
43        host="localhost",
44        user="root",
45        password="",
46        database="parcel_bill"
47    )
48    cursor = mydb.cursor()
49
50    # Insert data into the MySQL table
51    try:
52        sql = "INSERT INTO 'courier_info' (customer_name, parcel_type, weight, service_type, distance, total_bill) VALUES (%s, %s, %s, %s, %s, %s)"
53        val = (customer_name, parcel_type, weight, service_type, distance, total_bill)
54        cursor.execute(sql, val)
55        mydb.commit()
56        print("Data Inserted successfully")
57    except mysql.connector.Error as err:
58        print("Error: (err)")
59        mydb.rollback()
60
61    cursor.close()
62    mydb.close()
63
64    if weight <= 0 or distance <= 0:
65        messagebox.showerror("Error", "Please enter positive values for weight and distance.")
66
67
68 # Create the main Tkinter window
69 root = tkinter.Tk()
70 root.title("Parcel Bill")
71 root.geometry("300x400")
72 root.config(bg="#f0d8e4")
73
74 style = ttk.Style()
75 style.theme_use("default")
76 style.configure("Pink.TLabelFrame", bg="#f6cab7")
77 style.configure("Pink.TLabel", bg="#f6cab7")
78
79 parcel_bill_frame = ttk.LabelFrame(root, text="Parcel Bill", style="Pink.TLabelFrame")
80 title_label = ttk.Label(parcel_bill_frame, text="Parcel Bill")
81 parcel_bill_frame.grid(row=0, column=0, padx=20, pady=10, sticky="nsew") #use nsew to expand to fill its entire grid cell.
82 title_label.grid(row=0, column=0, sticky="nsew")
83
84 # Spacing and centering elements within the frame
85 for widget in parcel_bill_frame.winfo_children():
86     if isinstance(widget, (ttk.Label, ttk.Entry)):
87         widget.grid_configure(padx=20, pady=5, sticky="nsew")
88
89 customer_name_label = ttk.Label(parcel_bill_frame, text="Customer Name:", style="Pink.TLabel")
90 customer_name_label.grid(row=0, column=0, padx=5, pady=5)
91 customer_name_var = tkinter.StringVar()
92 customer_name_entry = ttk.Entry(parcel_bill_frame)
93 customer_name_entry.grid(row=0, column=1, padx=5, pady=5)
94
95 parcel_type_label = ttk.Label(parcel_bill_frame, text="Parcel Type:", style="Pink.TLabel")
96 parcel_type_label.grid(row=1, column=0, padx=5, pady=5)
97 parcel_type_var = tkinter.StringVar(value="choose your parcel type")
98 parcel_types = ["envelope", "small box", "medium box", "large box"]
99 parcel_type_combobox = ttk.Combobox(parcel_bill_frame, textvariable=parcel_type_var, values=parcel_types)
100 parcel_type_combobox.grid(row=1, column=1, padx=5, pady=5)
```



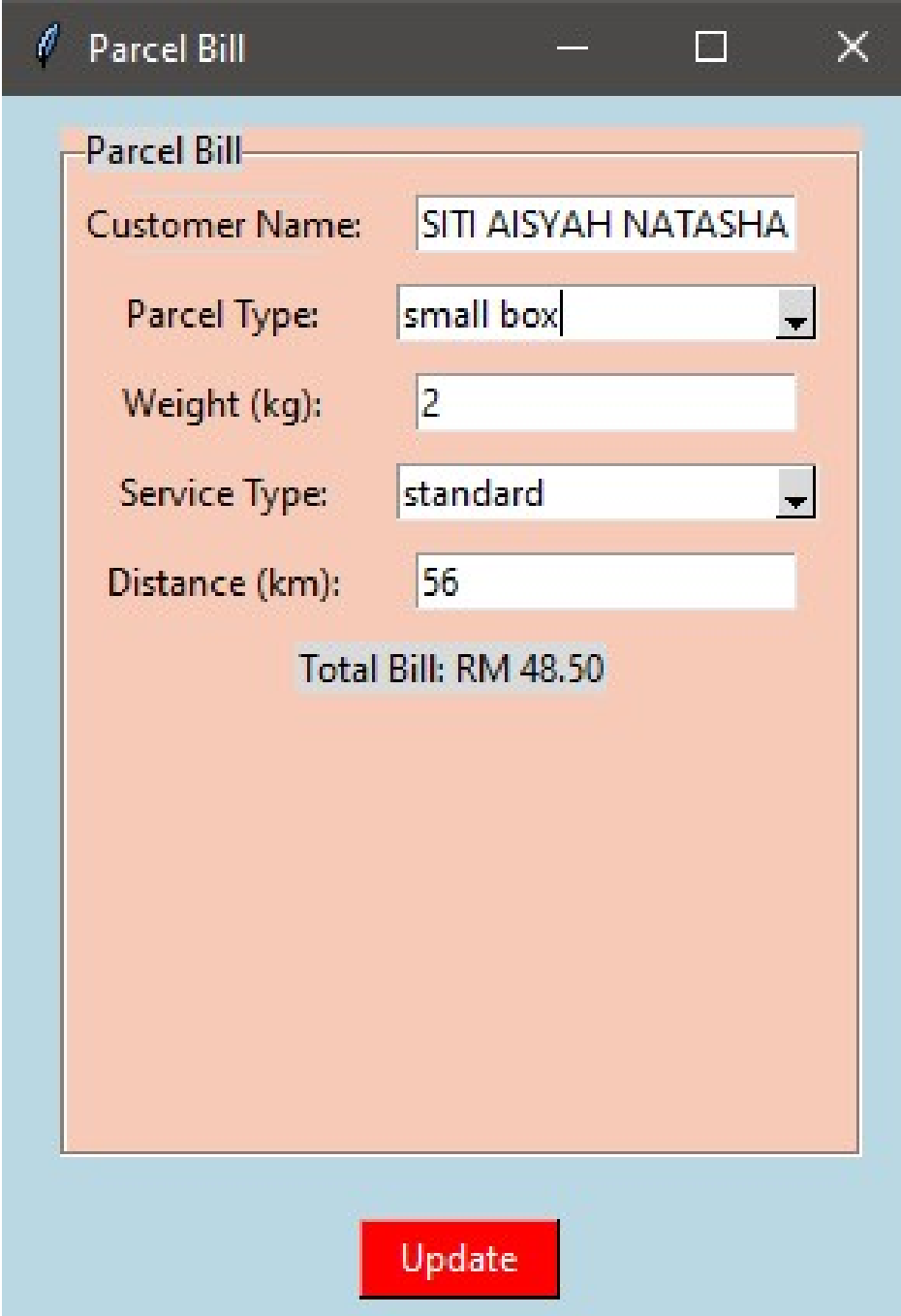
```

101 weight_label = ttk.Label(parcel_bill_frame, text="Weight (kg):", style="Pink.TLabel")
102 weight_label.grid(row=2, column=0, padx=5, pady=5)
103 weight_entry = ttk.Entry(parcel_bill_frame)
104 weight_entry.grid(row=2, column=1, padx=5, pady=5)
105
106 service_type_label = ttk.Label(parcel_bill_frame, text="Service Type:", style="Pink.TLabel")
107 service_type_label.grid(row=3, column=0, padx=5, pady=5)
108 service_type_var = tkinter.StringVar(value="choose service type")
109 service_types = ["express", "standard"]
110 service_type_combobox = ttk.Combobox(parcel_bill_frame, textvariable=service_type_var, values=service_types)
111 service_type_combobox.grid(row=3, column=1, padx=5, pady=5)
112
113 distance_label = ttk.Label(parcel_bill_frame, text="Distance (km):", style="Pink.TLabel")
114 distance_label.grid(row=4, column=0, padx=5, pady=5)
115 distance_entry = ttk.Entry(parcel_bill_frame)
116 distance_entry.grid(row=4, column=1, padx=5, pady=5)
117
118 total_bill_var = tkinter.StringVar()
119 total_bill_label = ttk.Label(parcel_bill_frame, textvariable=total_bill_var)
120 total_bill_label.grid(row=5, column=0, colspan=2, padx=5, pady=5)
121
122 # Create update button
123 style.configure("Red.Button", foreground="white", background="red")
124 update_button = ttk.Button(root, text="Update", command=parcel_bill, style="Red.Button")
125 update_button.grid(row=1, column=0, pady=10)
126
127 # Centering elements within the root window
128 root.columnconfigure(0, weight=1) # Allow the column to expand
129 root.rowconfigure(0, weight=1) # Allow the row to expand
130
131 root.mainloop()
132

```

Figure 2 snapshot of code

4.0 SNAPSHOT OF GUI



A screenshot of a web application window titled "Parcel Bill". The window has a dark grey header bar with a feather icon on the left and standard window controls (minimize, maximize, close) on the right. The main content area has a light blue background. Inside, there is a white-bordered box with an orange header "Parcel Bill". Below the header, there are five input fields: "Customer Name" with the text "SITI AISYAH NATASHA", "Parcel Type" with a dropdown menu showing "small box", "Weight (kg)" with the text "2", "Service Type" with a dropdown menu showing "standard", and "Distance (km)" with the text "56". Below these fields, the text "Total Bill: RM 48.50" is displayed. At the bottom of the white box, there is a red button with the text "Update".

Parcel Bill

Customer Name: SITI AISYAH NATASHA

Parcel Type: small box

Weight (kg): 2

Service Type: standard

Distance (km): 56

Total Bill: RM 48.50

Update

Figure 3 snapshot of GUI

5.0 SNAPSHOT OF DATABASE

Recent Favorites

Extra options

	id	customer_name	parcel_type	weight	service_type	distance	total_bill
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	SITI AISYAH NATASHA	large box	2	standard	127	453.5
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	NURUL SOFIAH	small box	0.02	express	69	44.66
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	MUHAMMAD ADDAM	medium box	0.03	express	251	261.36
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	NUR NABILA	small box	0.02	standard	5	7.16
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	MUHAMMAD ALI	large box	12	standard	20	224.5
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	6	AYEESHA WAHEEDA	medium box	0.08	standard	25	30.46

☐ Check all With selected: ☐ Edit ☐ Copy ☐ Delete ☐ Export

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

Query results operations

☐ Print ☐ Copy to clipboard ☐ Export ☐ Display chart ☐ Create view

Figure 4.0 snapshot of database

phpMyAdmin

Recent Favorites

Server: 127.0.0.1 » Database: parcel_bill » Table: courier_info

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	customer_name	varchar(100)	utf8mb4_general_ci		No	None			<input type="checkbox"/> Change <input type="checkbox"/> Drop <input type="checkbox"/> More
<input type="checkbox"/> 2	parcel_type	varchar(100)	utf8mb4_general_ci		No	None			<input type="checkbox"/> Change <input type="checkbox"/> Drop <input type="checkbox"/> More
<input type="checkbox"/> 3	weight	float			No	None			<input type="checkbox"/> Change <input type="checkbox"/> Drop <input type="checkbox"/> More
<input type="checkbox"/> 4	service_type	varchar(100)	utf8mb4_general_ci		No	None			<input type="checkbox"/> Change <input type="checkbox"/> Drop <input type="checkbox"/> More
<input type="checkbox"/> 5	distance	float			No	None			<input type="checkbox"/> Change <input type="checkbox"/> Drop <input type="checkbox"/> More
<input type="checkbox"/> 6	total_bill	float			No	None			<input type="checkbox"/> Change <input type="checkbox"/> Drop <input type="checkbox"/> More

☐ Check all With selected: ☐ Browse ☐ Change ☐ Drop ☐ Primary ☐ Unique ☐ Index ☐ Spatial ☐ Fulltext

☐ Add to central columns ☐ Remove from central columns

Figure 4.1 snapshot of database