COLLEGE OF COMPUTING, INFORMATICS, AND MATHEMATICS
UNIVERSITI TEKNOLOGI MARA (UiTM)
CAWANGAN KEDAH

DIPLOMA IN LIBRARY INFORMATICS
(IM144)
PROGRAMMING FOR LIBRARIES
(IML208)

INDIVIDUAL ASSIGNMENT:
LUXURY CAR RENTAL SYSTEM

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CLASS:
KCDIM1443F

PREPARED FOR:
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ACKNOWLEDGEMENT

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1. INTRODUCTION

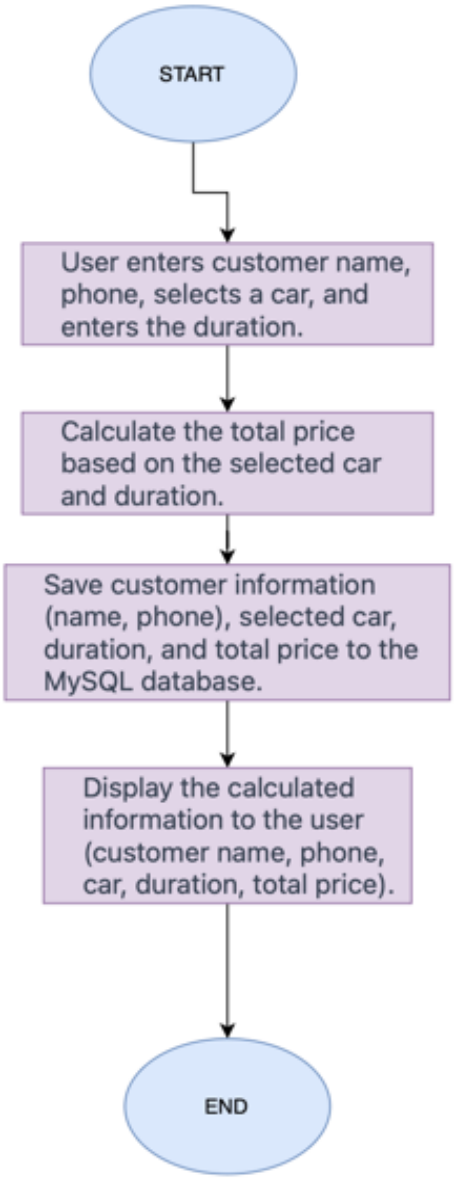
This cutting-edge application, which is called the Luxury Car Rental System, built using the powerful combination of Python's Tkinter library and MySQL for database management, offers an immersive and user-friendly experience for both customers and car rental administrators. This system acquires customers to enter their details such as their name and phone numbers, following with their desired car and rental duration. Data entered will be automatically stored in the MYSQL database.

The graphical user interface (GUI) of our Luxury Car Rental System boasts a sleek and sophisticated design. The rich red background, complemented by beige accents, provides a visually appealing and modern aesthetic. The carefully chosen colour palette enhances the overall user experience, reflecting the luxury and class associated with our premium car rental service. Effortless data entry is facilitated through intuitive input fields. Customers can input their name, phone number, choose a desired car model from a dropdown menu, specify the rental duration in days, and simply hit the "Calculate" button. The system then seamlessly processes the information for a quick and accurate rental calculation.

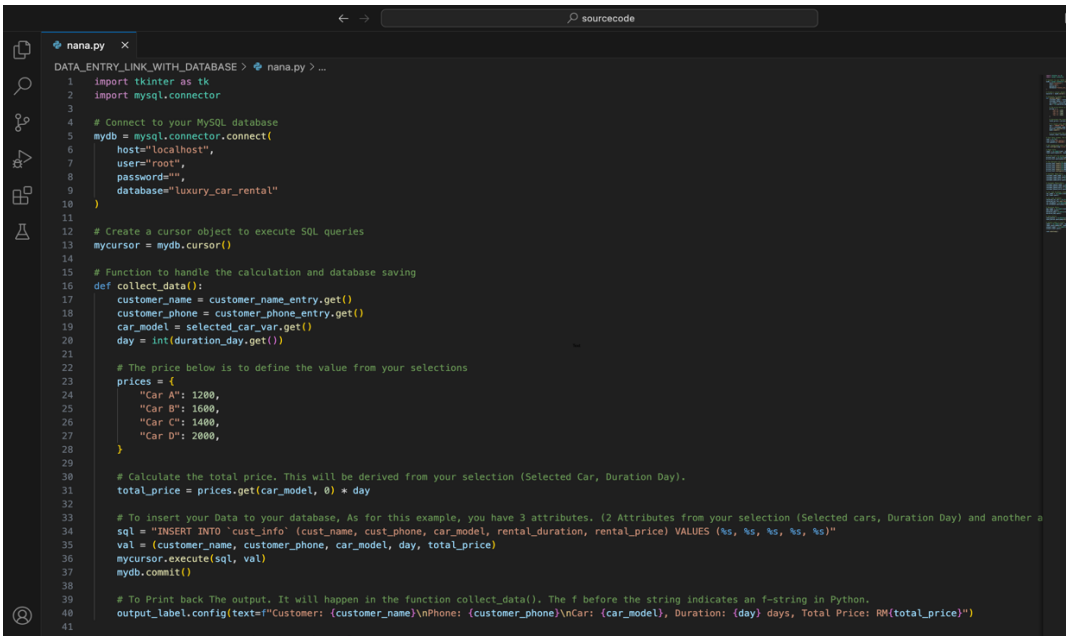
The application seamlessly integrates with a MySQL database to ensure secure and efficient data storage. Customer information, including names, phone numbers, selected car models, rental durations, and total prices, is stored in the database for future reference and administrative purposes.

Upon calculation, the system generates a real-time output displayed on the GUI. This output includes essential details such as the customer's name and phone number, the selected car model, rental duration, and the total price in Malaysian Ringgit (RM). This feature enhances transparency and allows customers to review their rental details at a glance.

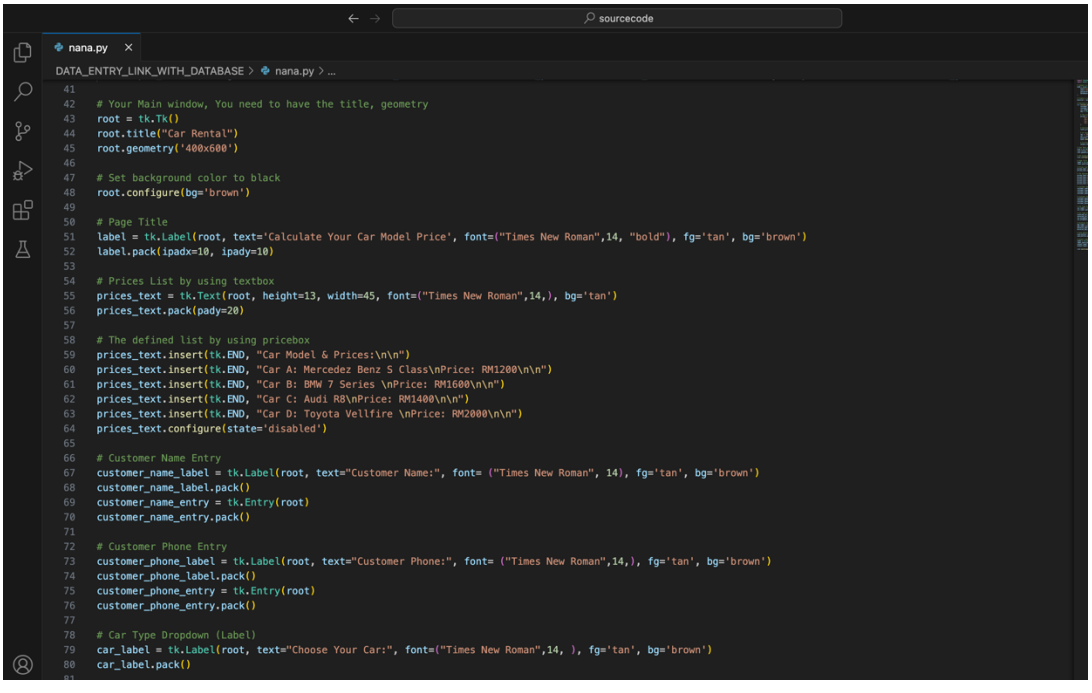
2. FLOW CHART


START
User enters customer name, phone, selects a car, and enters the duration.
Calculate the total price based on the selected car and duration.
Save customer information (name, phone), selected car, duration, and total price to the MySQL database.
Display the calculated information to the user (customer name, phone, car, duration, total price).
END

3. PYTHON CODE



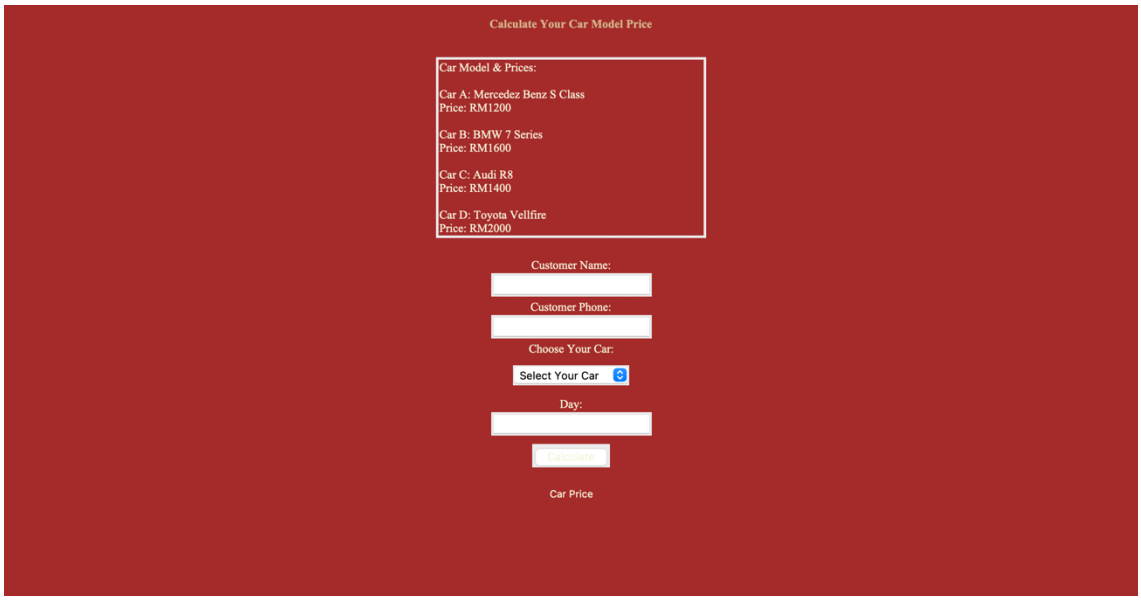
```python
import tkinter as tk
import mysql.connector

# Connect to your MySQL database
mydb = mysql.connector.connect(
    host="localhost",
    user="root",
    password="",
    database="luxury_car_rental"
)

# Create a cursor object to execute SQL queries
mycursor = mydb.cursor()

# Function to handle the calculation and database saving
def collect_data():
    customer_name = customer_name_entry.get()
    customer_phone = customer_phone_entry.get()
    car_model = selected_car_var.get()
    day = int(duration_day.get())

    # The price below is to define the value from your selections
    prices = {
        "Car A": 1200,
        "Car B": 1600,
        "Car C": 1400,
        "Car D": 2000,
    }

    # Calculate the total price. This will be derived from your selection (Selected Car, Duration Day).
    total_price = prices.get(car_model, 0) * day

    # To insert your Data to your database, As for this example, you have 3 attributes. (2 Attributes from your selection (Selected cars, Duration Day) and another a
    sql = "INSERT INTO `cust_info` (cust_name, cust_phone, car_model, rental_duration, rental_price) VALUES (%s, %s, %s, %s, %s)"
    val = (customer_name, customer_phone, car_model, day, total_price)
    mycursor.execute(sql, val)
    mydb.commit()

    # To Print back The output. It will happen in the function collect_data(). The f before the string indicates an f-string in Python.
    output_label.config(text=f"Customer: {customer_name}\nPhone: {customer_phone}\nCar: {car_model}, Duration: {day} days, Total Price: RM{total_price}")
```

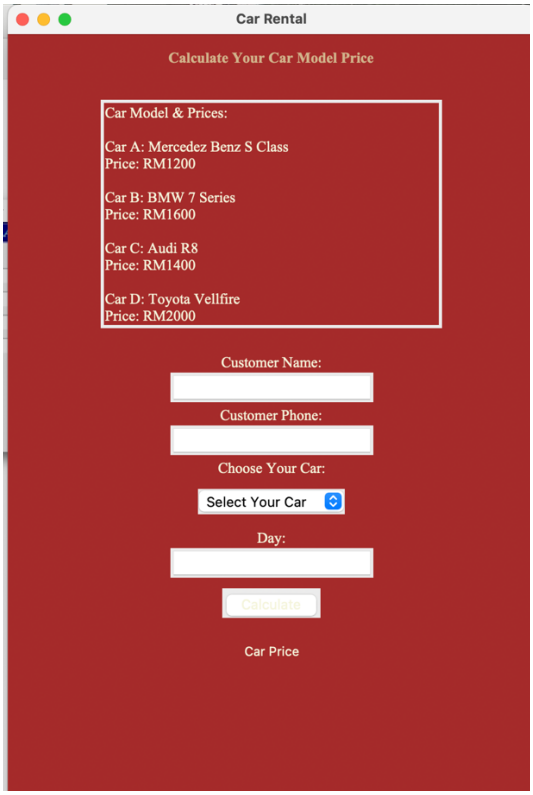


```python

# Your Main window, You need to have the title, geometry
root = tk.Tk()
root.title("Car Rental")
root.geometry('400x600')

# Set background color to black
root.configure(bg='brown')

# Page Title
label = tk.Label(root, text='Calculate Your Car Model Price', font=("Times New Roman",14, "bold"), fg='tan', bg='brown')
label.pack(ipadx=10, ipady=10)

# Prices List by using textbox
prices_text = tk.Text(root, height=13, width=45, font=("Times New Roman",14,), bg='tan')
prices_text.pack(pady=20)

# The defined list by using pricebox
prices_text.insert(tk.END, "Car Model & Prices:\n\n")
prices_text.insert(tk.END, "Car A: Mercedez Benz S Class\nPrice: RM1200\n\n")
prices_text.insert(tk.END, "Car B: BMW 7 Series \nPrice: RM1600\n\n")
prices_text.insert(tk.END, "Car C: Audi R8\nPrice: RM1400\n\n")
prices_text.insert(tk.END, "Car D: Toyota Vellfire \nPrice: RM2000\n\n")
prices_text.configure(state='disabled')

# Customer Name Entry
customer_name_label = tk.Label(root, text="Customer Name:", font= ("Times New Roman", 14), fg='tan', bg='brown')
customer_name_label.pack()
customer_name_entry = tk.Entry(root)
customer_name_entry.pack()

# Customer Phone Entry
customer_phone_label = tk.Label(root, text="Customer Phone:", font= ("Times New Roman",14,), fg='tan', bg='brown')
customer_phone_label.pack()
customer_phone_entry = tk.Entry(root)
customer_phone_entry.pack()

# Car Type Dropdown (Label)
car_label = tk.Label(root, text="Choose Your Car:", font=("Times New Roman",14, ), fg='tan', bg='brown')
car_label.pack()
```

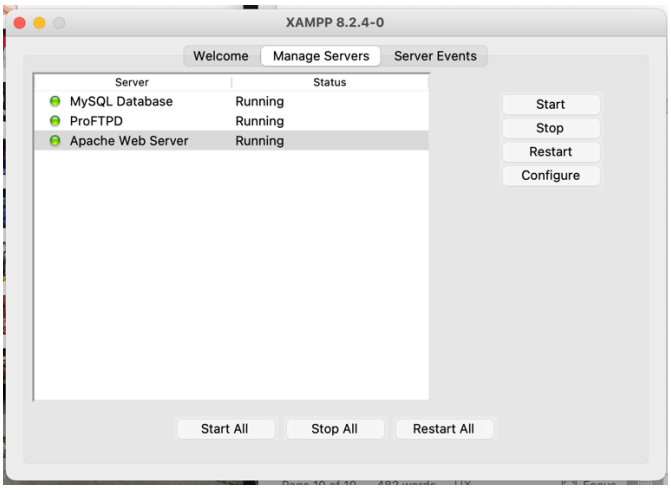
```python

# Car Type Dropdown
selected_car_var = tk.StringVar(root)
selected_car_var.set("Select Your Car")  # Default value before your selection
car_dropdown = tk.OptionMenu(root, selected_car_var, "Car A", "Car B", "Car C", "Car D")
car_dropdown.pack(pady=10)

# Duration Entry
day_label = tk.Label(root, text="Day:", font=("Times New Roman",14), fg='tan', bg='brown')
day_label.pack()
duration_day= tk.Entry(root)
duration_day.pack()

# Save Button
save_button = tk.Button(root, text="Calculate", command=collect_data, fg='brown', bg='tan')
save_button.pack(pady=10)

# Output Label & result
label = tk.Label(root, text='Car Price', font=("Times New Romans",12), fg='tan', bg='brown')
label.pack(ipadx=10, ipady=10)
output_label = tk.Label(root, text="", fg='tan', bg='brown')
output_label.pack()

root.mainloop()
```

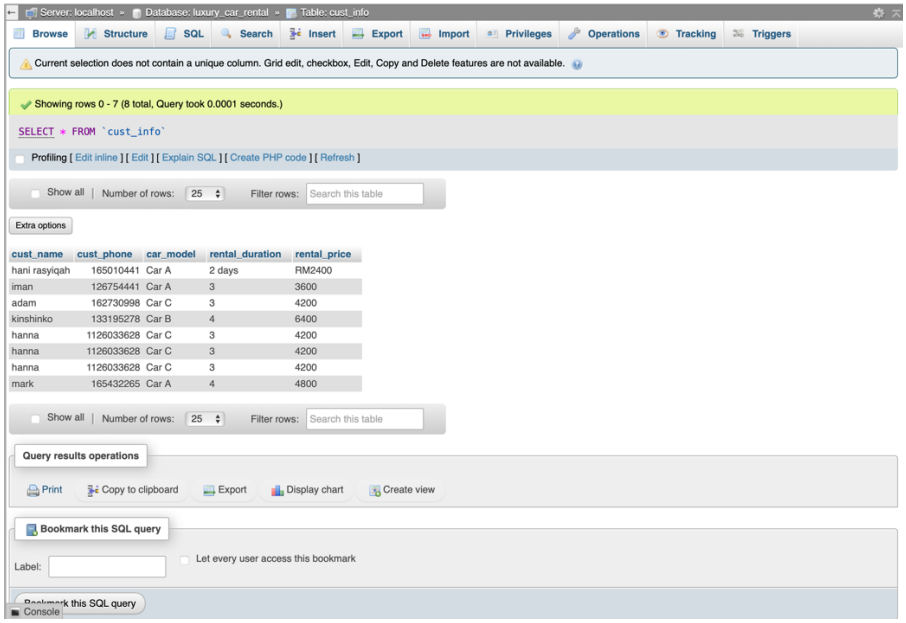
4. GRAPHICAL USER INTERFACE (GUI)

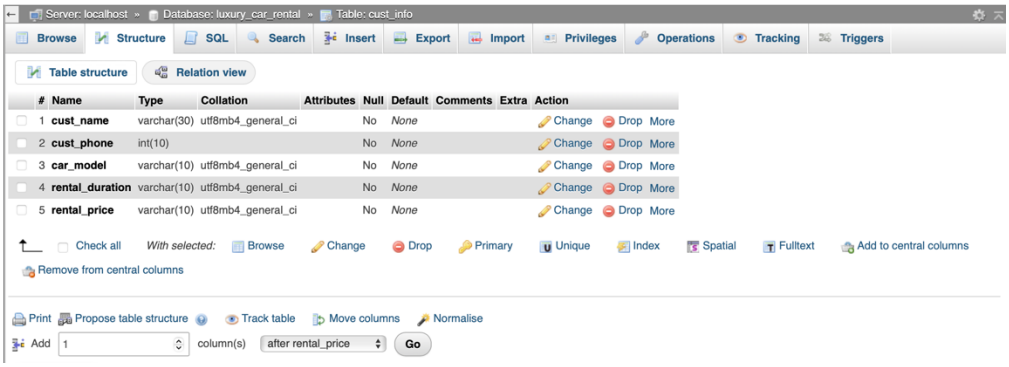




5. DATABASE


XAMPP 8.2.4-0
Welcome
Manage Servers
Server Events
Server
Status
MySQL Database
Running
ProFTPD
Running
Apache Web Server
Running
Start
Stop
Restart
Configure
Start All
Stop All
Restart All


Server: localhost » Database: luxury_car_rental » Table: cust_info
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Tracking
Triggers
Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.
Showing rows 0 - 7 (8 total, Query took 0.0001 seconds.)
SELECT * FROM `cust_info`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table
Extra options
cust_name cust_phone car_model rental_duration rental_price
hani rasyiqah 165010441 Car A 2 days RM2400
iman 126754441 Car A 3 3600
adam 162730998 Car C 3 4200
kinshinko 133195278 Car B 4 6400
hanna 1126033628 Car C 3 4200
hanna 1126033628 Car C 3 4200
hanna 1126033628 Car C 3 4200
mark 165432265 Car A 4 4800
Show all | Number of rows: 25 Filter rows: Search this table
Query results operations
Print
Copy to clipboard
Export
Display chart
Create view
Bookmark this SQL query
Label:
Let every user access this bookmark
Bookmark this SQL query
Console


Server: localhost » Database: luxury_car_rental » Table: cust_info
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Tracking
Triggers
Table structure
Relation view
Name Type Collation Attributes Null Default Comments Extra Action
1 cust_name varchar(30) utf8mb4_general_ci No None Change Drop More
2 cust_phone int(10) No None Change Drop More
3 car_model varchar(10) utf8mb4_general_ci No None Change Drop More
4 rental_duration varchar(10) utf8mb4_general_ci No None Change Drop More
5 rental_price varchar(10) utf8mb4_general_ci No None Change Drop More
Check all With selected: Browse Change Drop Primary Unique Index Spatial Fulltext Add to central columns
Remove from central columns
Print Propose table structure Track table Move columns Normalise
Add 1 column(s) after rental_price Go