



UNIVERSITI TEKNOLOGI MARA

KEDAH BRANCH

SCHOOL OF INFORMATION SCIENCE

COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

DIPLOMA IN LIBRARY INFORMATICS (IM144)

IML 208 : PROGRAMMING FOR LIBRARIES

INDIVIDUAL ASSIGNMENT

GRAB CAR BOOKING SYSTEM

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KCDIM144 3E

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SUBMISSION DATE:

WEEK 10

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- 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.
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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 : MUHAMMAD IQBAL BIN SUHAIMI

Matric Number : 2023467054

Course Code : IML208

Programme Code :-

Faculty / Campus : UiTM Kampus Sungai Petani

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Project Name: Grab Car Booking System

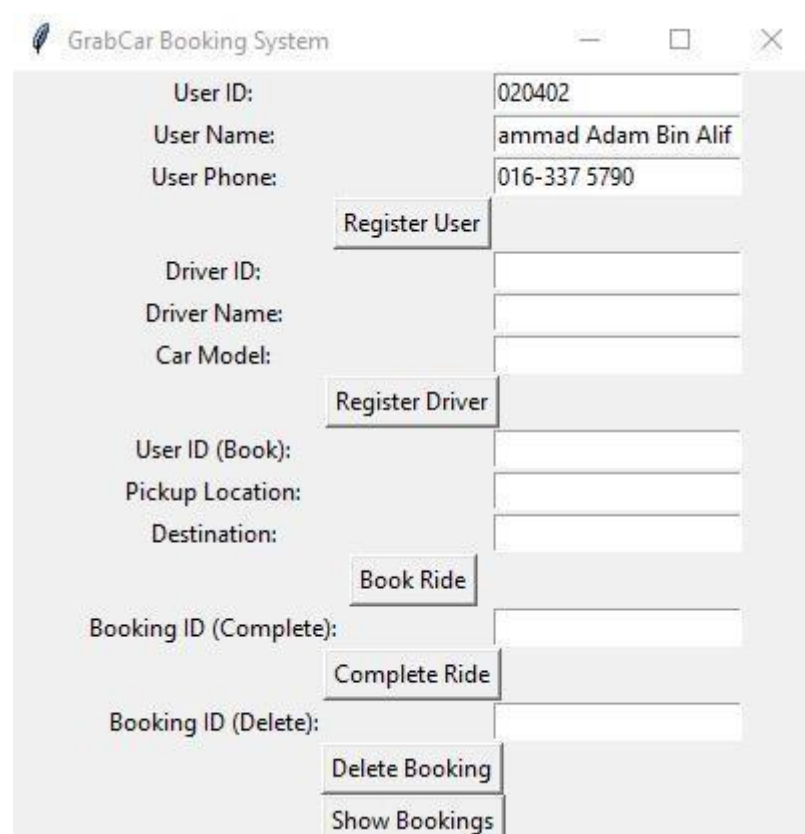
File name : grabcar.py

Prompt Data:

- i. User Name
- ii. Phone Number
- iii. Pickup Location
- iv. Pickup Destination

Function :

- i. Create data



The screenshot displays the 'GrabCar Booking System' application window. It features a light gray background with various input fields and buttons. The top section contains fields for 'User ID:', 'User Name:', and 'User Phone:', with values '020402', 'ammad Adam Bin Alif', and '016-337 5790' respectively. Below these is a 'Register User' button. The middle section has fields for 'Driver ID:', 'Driver Name:', and 'Car Model:', followed by a 'Register Driver' button. The bottom section includes fields for 'User ID (Book):', 'Pickup Location:', and 'Destination:', with a 'Book Ride' button. Further down are fields for 'Booking ID (Complete):' and 'Booking ID (Delete):', with 'Complete Ride' and 'Delete Booking' buttons respectively. At the very bottom is a 'Show Bookings' button. The window has standard Windows-style title bar controls (minimize, maximize, close) in the top right corner.

| | |
|----------------------------------|---------------------|
| User ID: | 020402 |
| User Name: | ammad Adam Bin Alif |
| User Phone: | 016-337 5790 |
| <button>Register User</button> | |
| Driver ID: | |
| Driver Name: | |
| Car Model: | |
| <button>Register Driver</button> | |
| User ID (Book): | |
| Pickup Location: | |
| Destination: | |
| <button>Book Ride</button> | |
| Booking ID (Complete): | |
| <button>Complete Ride</button> | |
| Booking ID (Delete): | |
| <button>Delete Booking</button> | |
| <button>Show Bookings</button> | |

ii. Read data

GrabCar Booking System

| | |
|--|---------------------|
| User ID: | 020402 |
| User Name: | ammad Adam Bin Alif |
| User Phone: | 016-337 5790 |
| <input type="button" value="Register User"/> | |
| Driver ID: | |
| Driver Name: | |
| Car Model: | |
| <input type="button" value="Register Driver"/> | |
| User ID (Book): | |
| Pickup Location: | |
| Destination: | |
| <input type="button" value="Book Ride"/> | |
| Booking ID (Complete): | |
| <input type="button" value="Complete Ride"/> | |
| Booking ID (Delete): | |
| <input type="button" value="Delete Booking"/> | |
| <input type="button" value="Show Bookings"/> | |

User Muhammad Adam Bin Alif registered successfull
y.

iii. Update data

GrabCar Booking System

| | |
|--|---------------------|
| User ID: | 020402 |
| User Name: | ammad Adam Bin Alif |
| User Phone: | 016-337 5790 |
| <input type="button" value="Register User"/> | |
| Driver ID: | |
| Driver Name: | |
| Car Model: | |
| <input type="button" value="Register Driver"/> | |
| User ID (Book): | |
| Pickup Location: | |
| Destination: | |
| <input type="button" value="Book Ride"/> | |
| Booking ID (Complete): | |
| <input type="button" value="Complete Ride"/> | |
| Booking ID (Delete): | |
| <input type="button" value="Delete Booking"/> | |
| <input type="button" value="Show Bookings"/> | |

User Muhammad Adam Bin Alif registered successfully.

Before update the data user

GrabCar Booking System

User ID:

020402

User Name:

ammad Adam Bin Alif

User Phone:

016-337 5790

Register User

Driver ID:

1

Driver Name:

ammad Adam Bin Alif

Car Model:

Perodua Bezza

Register Driver

User ID (Book):

020402

Pickup Location:

Sungai Petani

Destination:

Baling

Book Ride

Booking ID (Complete):

Complete Ride

Booking ID (Delete):

Delete Booking

Show Bookings

User Muhammad Adam Bin Alif registered successfully.

Driver Muhammad Adam Bin Alif registered successfully.

Ride booked successfully. Booking ID: 1, Driver: Muhammad Adam Bin Alif

Book ride update succesful

iv. Delete data

GrabCar Booking System

| | |
|--|---------------------|
| User ID: | 020402 |
| User Name: | ammad Adam Bin Alif |
| User Phone: | 016-337 5790 |
| <input type="button" value="Register User"/> | |
| Driver ID: | 1 |
| Driver Name: | ammad Adam Bin Alif |
| Car Model: | Perodua Bezza |
| <input type="button" value="Register Driver"/> | |
| User ID (Book): | 020402 |
| Pickup Location: | Sungai Petani |
| Destination: | Baling |
| <input type="button" value="Book Ride"/> | |
| Booking ID (Complete): | |
| <input type="button" value="Complete Ride"/> | |
| Booking ID (Delete): | |
| <input type="button" value="Delete Booking"/> | |
| <input type="button" value="Show Bookings"/> | |

User Muhammad Adam Bin Alif registered successfully.
Driver Muhammad Adam Bin Alif registered successfully.
Ride booked successfully. Booking ID: 1, Driver: Muhammad Adam Bin Alif

Before delete the booking

Complete ride succesful

Booking ID (Complete):

Booking ID (Delete):

```
User Muhammad Adam Bin Alif registered successfull
Y.
Driver Muhammad Adam Bin Alif registered successfu
lly.
Ride booked successfully. Booking ID: 1, Driver: M
uhammad Adam Bin Alif
Ride 1 completed successfully.
```

Booking ID (Delete):

```
User Muhammad Adam Bin Alif registered successfull
Y.
Driver Muhammad Adam Bin Alif registered successfu
lly.
Ride booked successfully. Booking ID: 1, Driver: M
uhammad Adam Bin Alif
Ride 1 completed successfully.
Booking 1 deleted successfully.
```

Delete booking succesful

```
User Muhammad Adam Bin Alif registered successfull
Y.
Driver Muhammad Adam Bin Alif registered successfu
lly.
Ride booked successfully. Booking ID: 1, Driver: M
uhammad Adam Bin Alif
Ride 1 completed successfully.
Booking 1 deleted successfully.
No bookings available.
```

No booking is available

Conditional Statement : Yes

```
62 def main():
75     choice = input("Enter your choice: ")
76
77     if choice == "1":
78         name = input("Enter Name: ")
79         phone = input("Enter Phone Number: ")
80         print(system.register_user(name, phone))
81
82     elif choice == "2":
83         name = input("Enter Name: ")
84         car_model = input("Enter Car Model: ")
85         print(system.register_driver(name, car_model))
86
87     elif choice == "3":
88         phone = input("Enter Phone Number: ")
89         pickup_location = input("Enter Pickup Location: ")
90         destination = input("Enter Destination: ")
91         print(system.book_ride(phone, pickup_location, destination))
92
93     elif choice == "4":
94         booking_id = int(input("Enter Booking ID: "))
95         print(system.complete_ride(booking_id))
96
97     elif choice == "5":
98         booking_id = int(input("Enter Booking ID to delete: "))
99         print(system.delete_booking(booking_id))
100
101     elif choice == "6":
102         bookings = system.show_bookings()
103         if bookings:
104             for booking in bookings:
105                 print(booking)
106         else:
107             print("No bookings available.")
108
109     elif choice == "7":
110         print("Exiting the system. Goodbye!")
111         break
112
113     else:
114         print("Invalid choice. Please try again.")
115
116 if __name__ == "__main__":
117     main()
```

GUI : Yes

The screenshot shows a window titled "GrabCar Booking System" with a light gray background. The interface is organized into several sections with labels and input fields:

- User Registration:** Labels "User ID:", "User Name:", and "User Phone:" are followed by empty text input fields. Below these is a "Register User" button.
- Driver Registration:** Labels "Driver ID:", "Driver Name:", and "Car Model:" are followed by empty text input fields. Below these is a "Register Driver" button.
- Booking Section:** Labels "User ID (Book):", "Pickup Location:", and "Destination:" are followed by empty text input fields. Below these is a "Book Ride" button.
- Booking Management:** Labels "Booking ID (Complete):" and "Booking ID (Delete):" are followed by empty text input fields. Below these are "Complete Ride" and "Delete Booking" buttons.
- Show Bookings:** A "Show Bookings" button is located at the bottom of the main form area.

A small rectangular area is visible at the bottom of the window, likely a status bar or message display area.

Result:

This screenshot shows the same "GrabCar Booking System" window, but with the "Register User" button highlighted. The input fields for user registration are now filled with the following data:

- User ID:** 020402
- User Name:** ammad Adam Bin Alif
- User Phone:** 016-337 5790

The "Register User" button is highlighted with a dark border. The other sections of the interface remain the same as in the previous screenshot.

At the bottom of the window, a message is displayed: "User Muhammad Adam Bin Alif registered successfull y." (Note the typo in the original image).

Strength:

1. **Modular Structure:** The code is well-organized and modular, with clear separation of functions for different tasks such as registering users, registering drivers, booking rides, and managing bookings. This makes the code easier to read and maintain.
2. **User-Friendly Messages:** The code provides user-friendly messages for actions like successful registration, booking completion, and error handling (e.g., when a user or driver is not registered).
3. **Comprehensive Functionality:** The code covers all essential functionalities of a ride-booking system, including user and driver registration, ride booking, completion, deletion of bookings, and showing all bookings.
4. **Loop for Continuous Operation:** The while True loop allows the program to run continuously, handling multiple user requests until the user chooses to exit.
5. **Input Validation:** The code checks if a user is already registered by phone number before adding them, preventing duplicates. It also ensures that only registered users can book rides.

Kaizen (Room for improvement) :

1. **Error Handling:** While there are basic checks for some errors, more comprehensive error handling could be added. For example, handle situations where non-integer input is provided where an integer is expected (e.g., booking ID).

2. **Data Persistence:** Currently, the system does not save data between runs. Consider implementing a way to persist data, such as saving to a file or database, so that information is not lost when the program is closed.

3. **Scalability:** As the number of users, drivers, and bookings increases, the linear search method used in some functions (next and list comprehensions) may become inefficient. Consider using more efficient data structures or indexing.

4. **Improved User Experience:** Enhance the user experience by adding features like searching for specific bookings or users, updating user or driver information, and more detailed booking information (e.g., timestamps).

5. **Security Measures:** Implement basic security measures, such as input sanitization, to prevent injection attacks or accidental errors from unsanitized inputs.