UNIVERSITI TEKNOLOGI MARA

KEDAH BRANCH

SCHOOL OF INFORMATION SCIENCE

COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

DIPLOMA IN LIBRARY INFORMATIC (IM144)

IML 208 : PROGRAMMING FOR LIBRARIES

INDIVIDUAL ASSIGNMENT

GRAB CAR BOOKING SYSTEM

PREPARED BY:

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KCDIM144 3E

PREPARED FOR:

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SUBMISSION DATE:

WEEK 10

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STUDENT PLEDGE OF ACADEMIC INTEGRITY

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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 : MUHAMMAD IQBAL BIN SUHAIMI
Matric Number : 2023467054
Course Code : IML208
Programme Code :-
Faculty / Campus : UiTM Kampus Sungai Petani

ACKNOWLEDGEMENT

First of all, I would like to thank Allah SWT, the Almighty for giving me the strength and patience to do this assignment. I was able to make progress on this assignment with minor distractions and difficulties.

Alhamdulillah, I extend my heartfelt gratitude to my parents for their unwavering support and encouragement in my educational journey. Thanks to the encouragement and love from my parents, without whom I could not have completed this assignment. Besides, I also want to say a thousand thanks to Sir Firdaus for teaching me about the Programming For Libraries . His learning method has improved my knowledge in this subject. Thank you for teaching me about knowledge that can give me ideas to complete this assignment.

Project Name: Grab Car Booking System

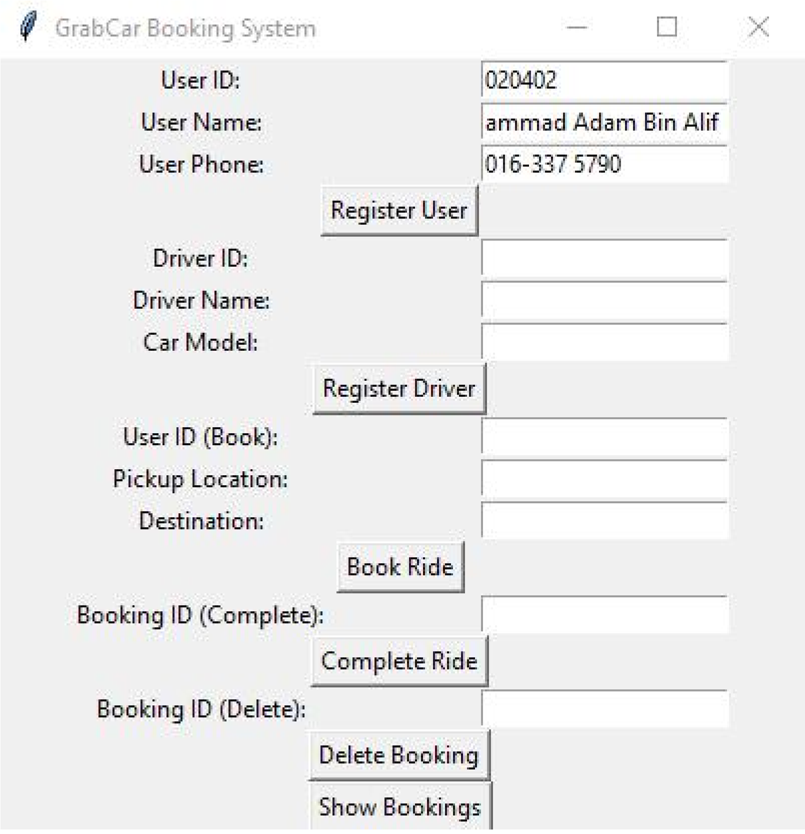
File name : grabcar.py

Prompt Data :

i. Register User
ii. Register Driver
iii. Book Ride
iv. Complete/Delete/Show Bookings and Exit

Function :

i. Create data

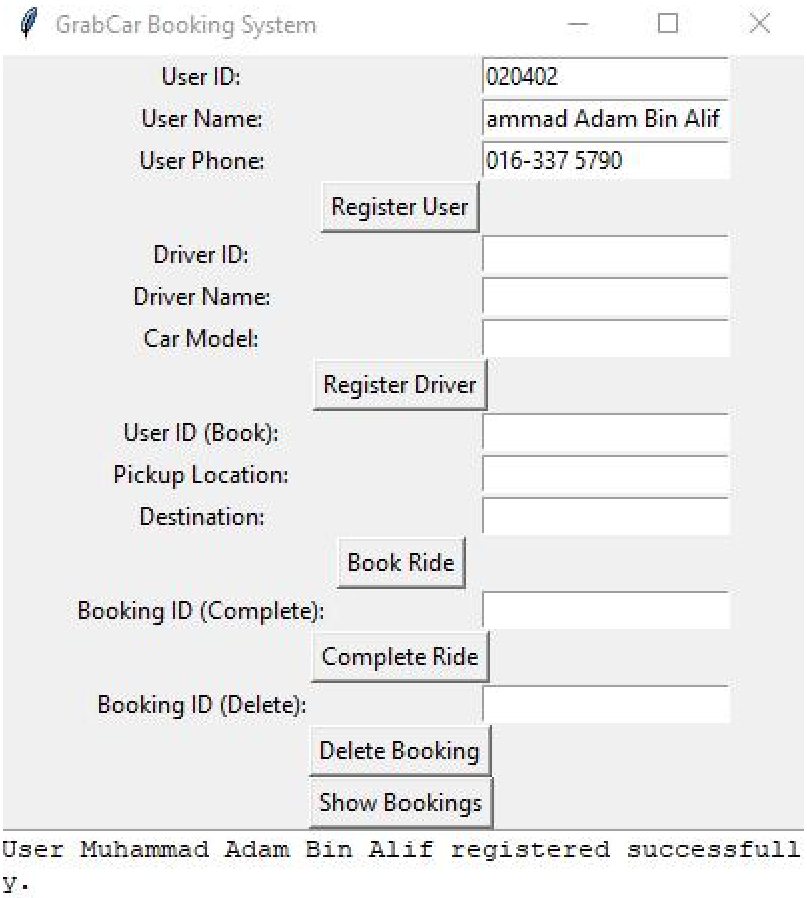


User ID: 020402

User Name: ammad Adam Bin Alif

User Phone: 016-337 5790

ii . Read data



User ID: 020402

User Name: ammad Adam Bin Alif

User Phone: 016-337 5790

Driver ID:

Driver Name:

Car Model:

User ID (Book):

Pickup Location:

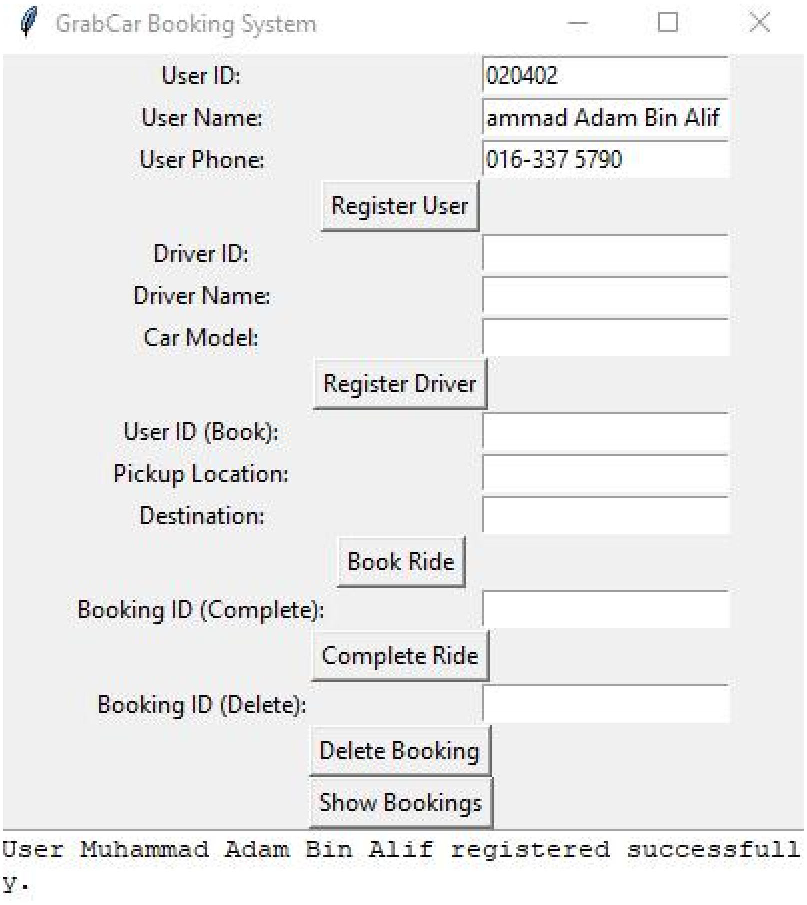
Destination:

Booking ID (Complete):

Booking ID (Delete):

```
User Muhammad Adam Bin Alif registered successfull
y.
```

iii.Update data



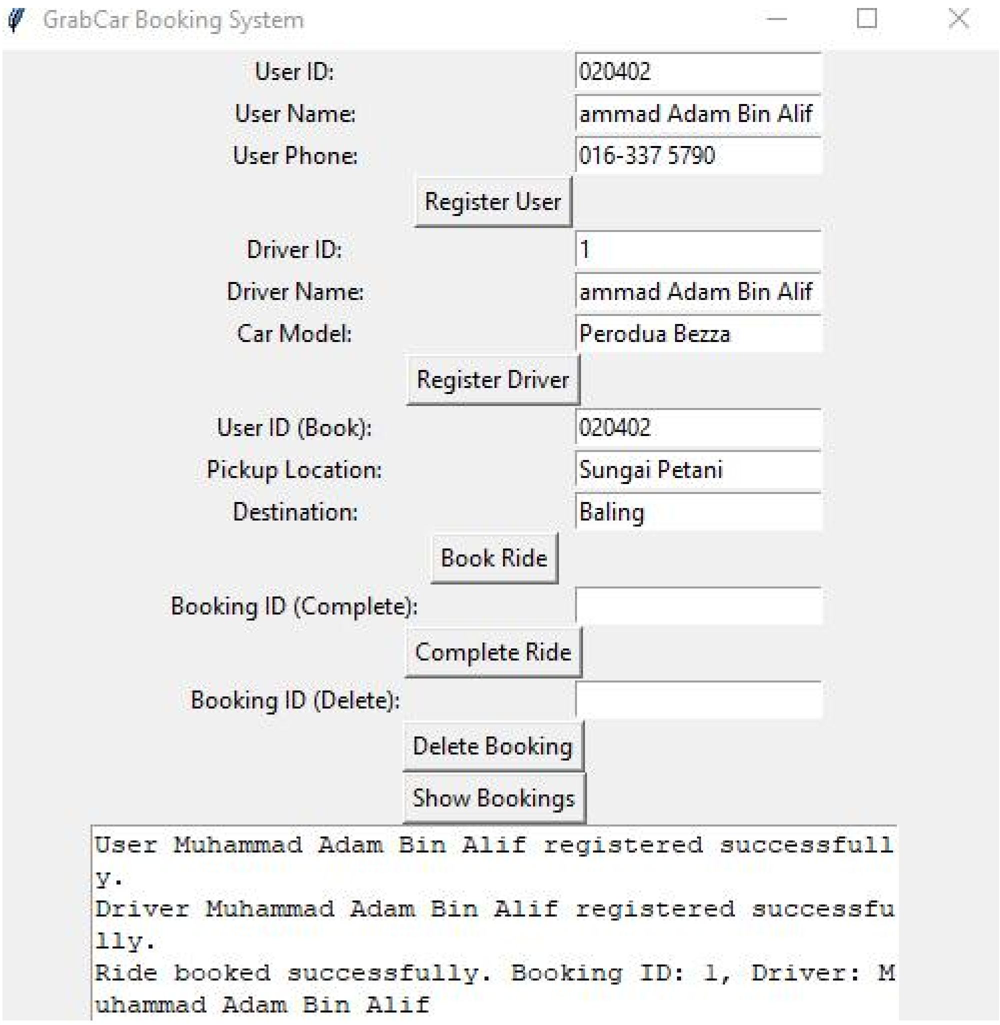
User ID: 020402

User Name: ammad Adam Bin Alif

User Phone: 016-337 5790

```
User Muhammad Adam Bin Alif registered successfull
y.
```

Before update the data user



User ID: 020402

User Name: ammad Adam Bin Alif

User Phone: 016-337 5790

Driver ID: 1

Driver Name: ammad Adam Bin Alif

Car Model: Perodua Bezza

User ID (Book): 020402

Pickup Location: Sungai Petani

Destination: Baling

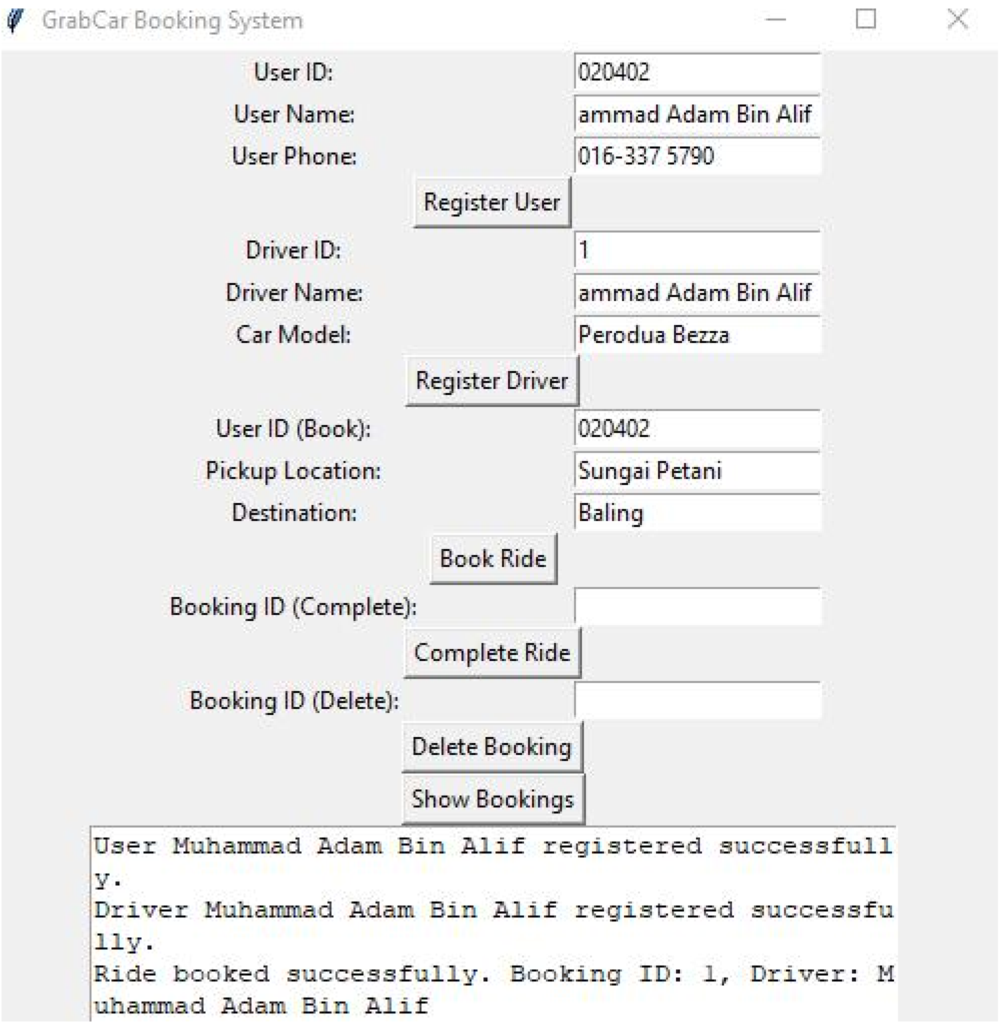
Booking ID (Complete):

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
```

Book ride update succesful

Iv. Delete data



User ID: 020402

User Name: ammad Adam Bin Alif

User Phone: 016-337 5790

Driver ID: 1

Driver Name: ammad Adam Bin Alif

Car Model: Perodua Bezza

User ID (Book): 020402

Pickup Location: Sungai Petani

Destination: Baling

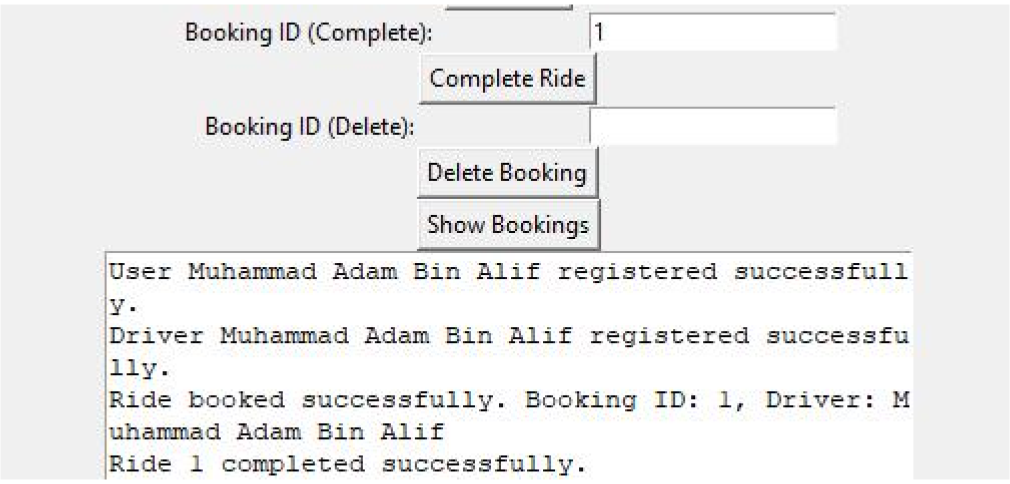
Booking ID (Complete):

Booking ID (Delete):

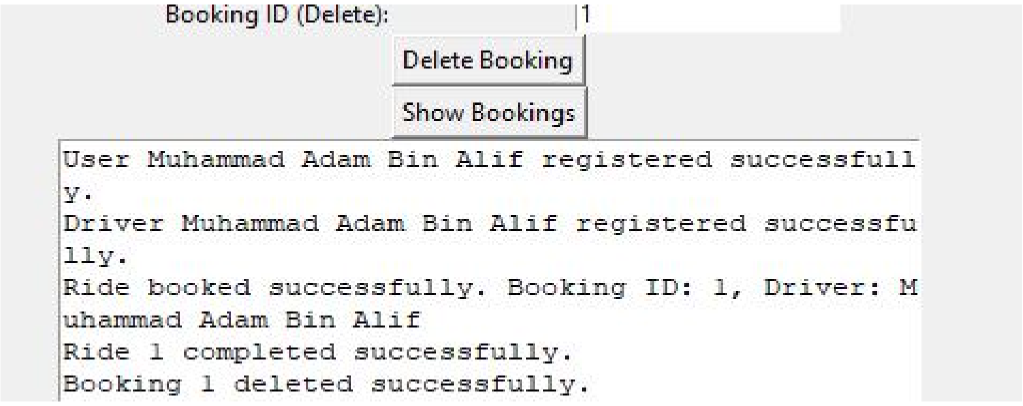
```
User Muhammad Adam Bin Alif registered successfull
y.
Driver Muhammad Adam Bin Alif registered successfu
lly.
Ride booked successfully. Booking ID: 1, Driver: M
uhammad Adam Bin Alif
```

Before delete the booking

Complete ride succesful

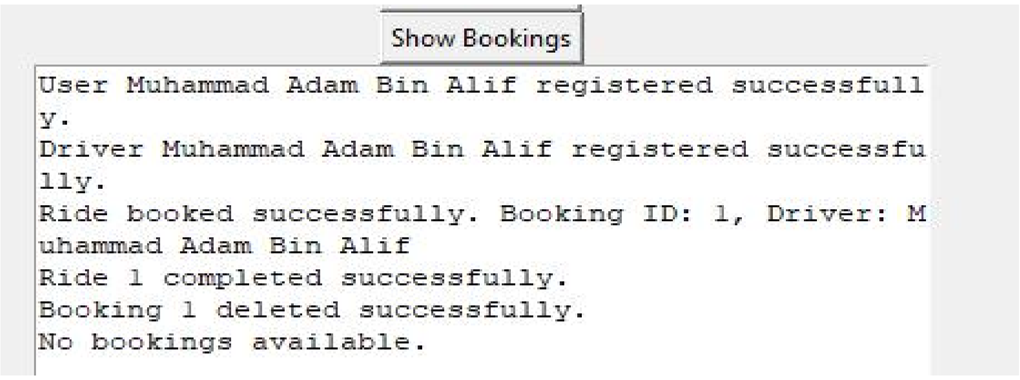


```
User Muhammad Adam Bin Alif registered successfull
y.
Driver Muhammad Adam Bin Alif registered successfu
lly.
Ride booked successfully. Booking ID: 1, Driver: M
uhammad Adam Bin Alif
Ride 1 completed successfully.
```



```
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.
```

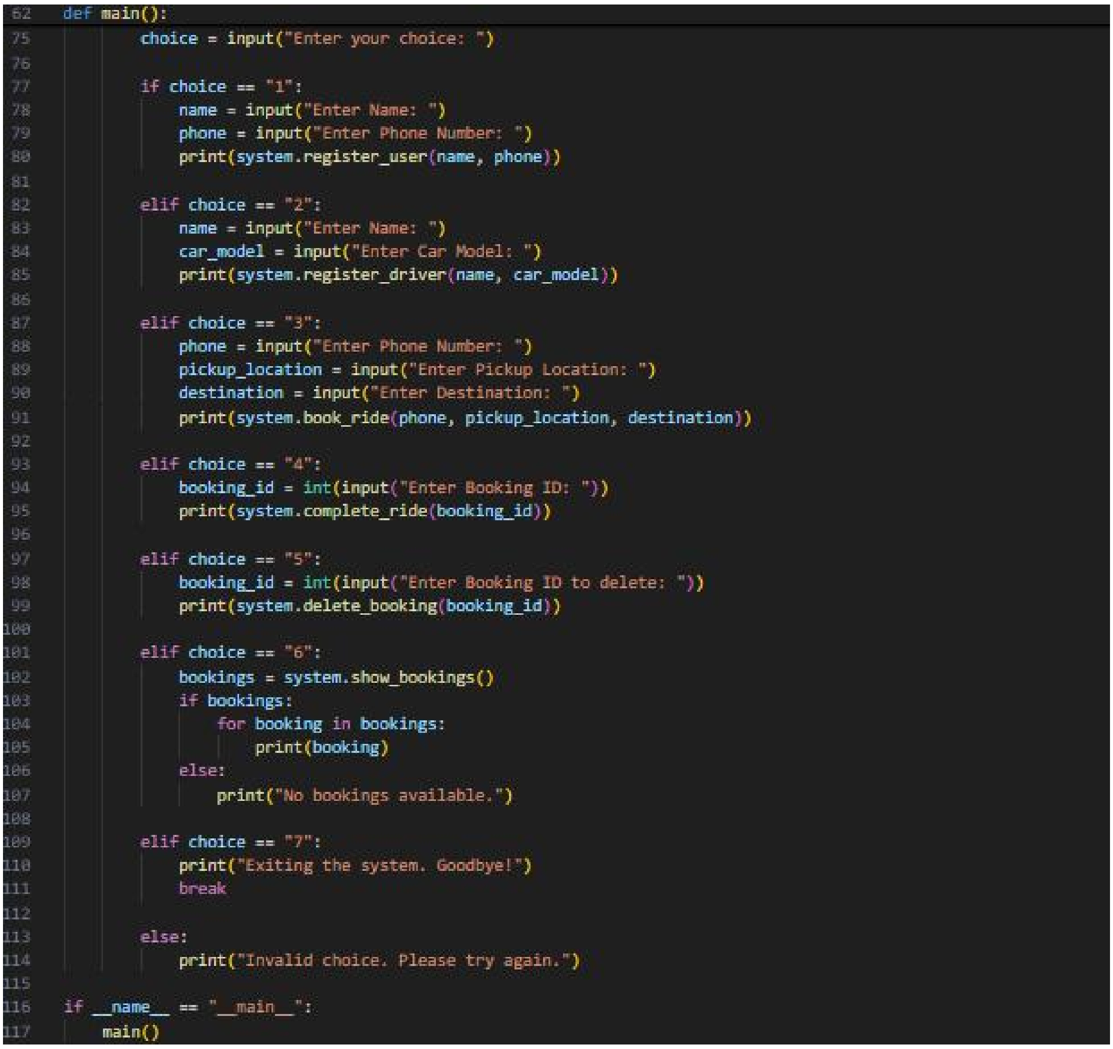
Delete booking succesful



```
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.
```

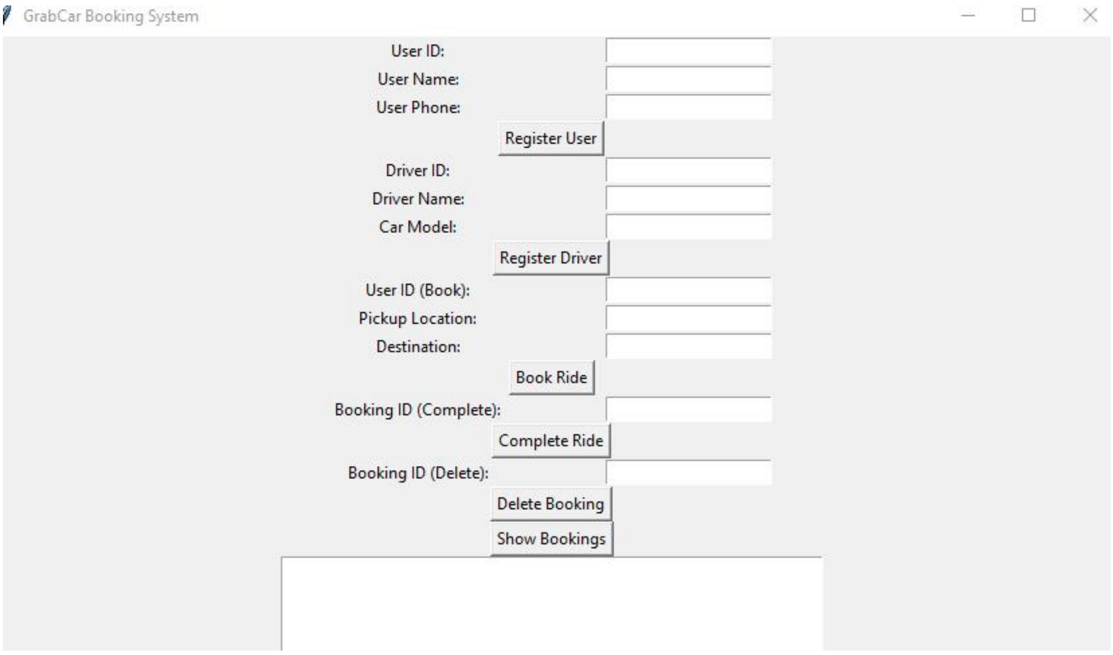
No booking is available

Conditional Statement : Yes

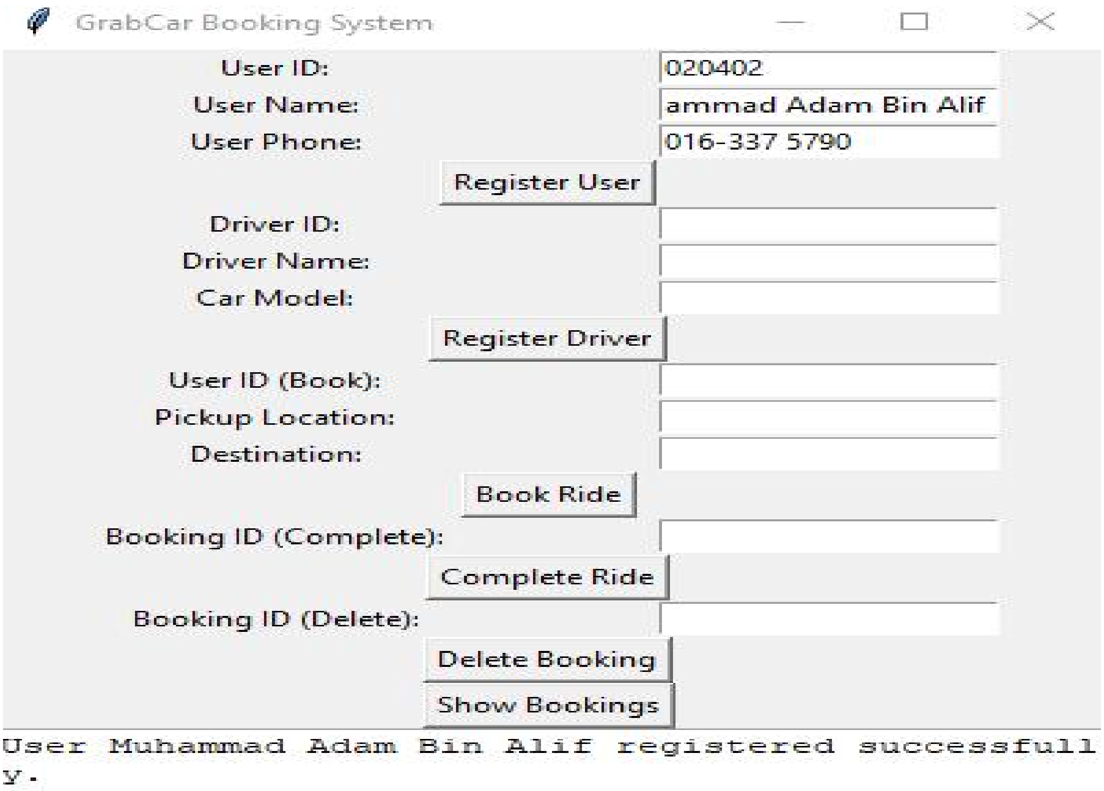


```python
def main():
        choice = input("Enter your choice: ")

        if choice == "1":
            name = input("Enter Name: ")
            phone = input("Enter Phone Number: ")
            print(system.register_user(name, phone))

        elif choice == "2":
            name = input("Enter Name: ")
            car_model = input("Enter Car Model: ")
            print(system.register_driver(name, car_model))

        elif choice == "3":
            phone = input("Enter Phone Number: ")
            pickup_location = input("Enter Pickup Location: ")
            destination = input("Enter Destination: ")
            print(system.book_ride(phone, pickup_location, destination))

        elif choice == "4":
            booking_id = int(input("Enter Booking ID: "))
            print(system.complete_ride(booking_id))

        elif choice == "5":
            booking_id = int(input("Enter Booking ID to delete: "))
            print(system.delete_booking(booking_id))

        elif choice == "6":
            bookings = system.show_bookings()
            if bookings:
                for booking in bookings:
                    print(booking)
            else:
                print("No bookings available.")

        elif choice == "7":
            print("Exiting the system. Goodbye!")
            break

        else:
            print("Invalid choice. Please try again.")

if __name__ == "__main__":
    main()
```

GUI : Yes



Result:



User ID: 020402

User Name: ammad Adam Bin Alif

User Phone: 016-337 5790

```
User Muhammad Adam Bin Alif registered successfull
y.
```

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.