UNIVERSITI TEKNOLOGI MARA

KEDAH BRANCH

SCHOOL OF INFORMATION SCIENCE

COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

DIPLOMA IN LIBRARY INFORMATIC (CDIM144)

IML208

INDIVIDUAL ASSIGNMENT

PREPARED BY:

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GROUP :

KCDIM144 3E

PREPARED FOR:

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SUBMISSION DATE :

INDIVIDUAL ASSIGNMENT

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UNIVERSITY TEKNOLOGI MARA (UITM) KEDAH, KAMPUS SUNGAI PETANI

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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: Ahmad Aiman Anis bin Mohamad

Matric Number: 2023620778

Course Code: CDIM144

Programme code: IML208

Faculty / Campus: SCHOOL OF INFORMATION SCIENCE COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

ACKNOWLEDGEMENT

Assalamualaikum w.b.t.

Alhamdulillah, I extend my heartfelt gratitude to God for giving us the strength to complete the assignment and my parents for their unwavering support and encouragement in my educational journey. Thanks to the encouragement and love from my parents who were able to give me to complete this assignment without them I could not have done it. Besides, I also want to say a thousand thanks to Sir Mohd Firdaus bin Mohd Helmi for teaching me to complete the assignment. His learning method to some extent can improve my knowledge. Thank you for teaching me about this chapters that can give me ideas to complete this assignment.

Lastly, I would also like to thank all my classmates for their help throughout the assignment. Their prompt response in answering questions in group or private chats greatly enhanced my understanding of the subject matter.

Project name : Futsal Court Booking System

File name : futsalcourtbooking.py

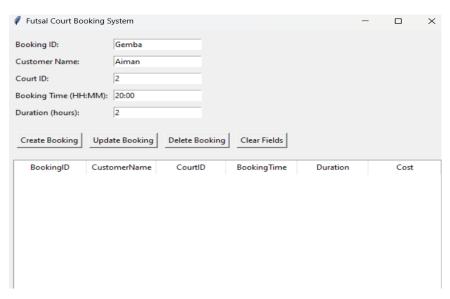**Prompt Data :**

i.   Booking ID
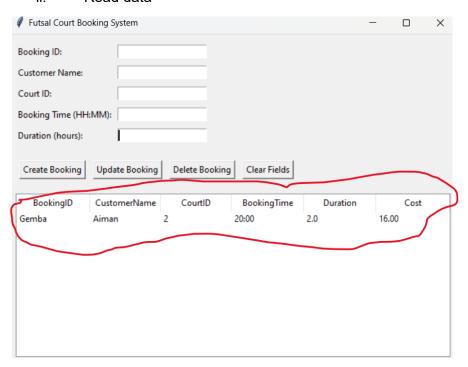
ii.   Customer name

iii.   Court ID

iv.   Booking Time

v.   Duration (in hours)
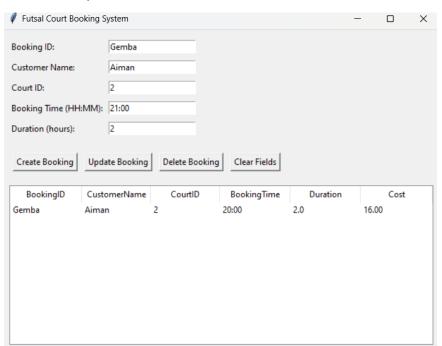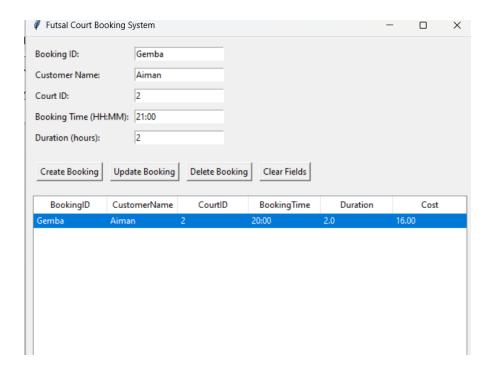

Function :

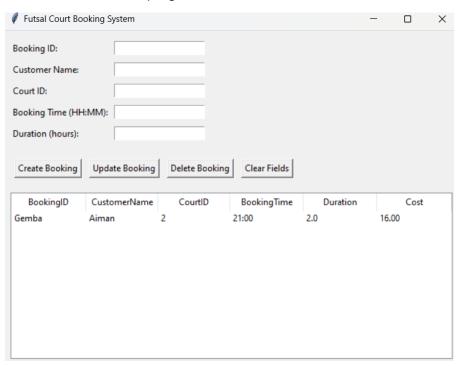i.   Create data

ii.   Read data

iii.   Update data
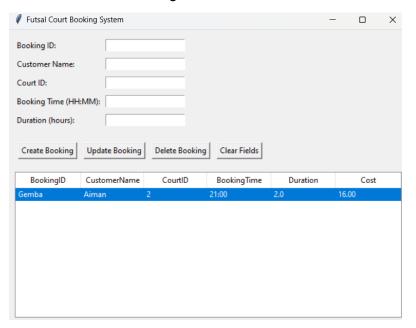

Result before run the program
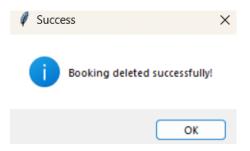
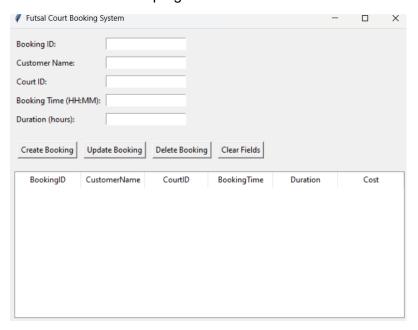Result when i run the program

Result after run the program

iv.   Delete existing data

Result before run the program

Result when I run the program
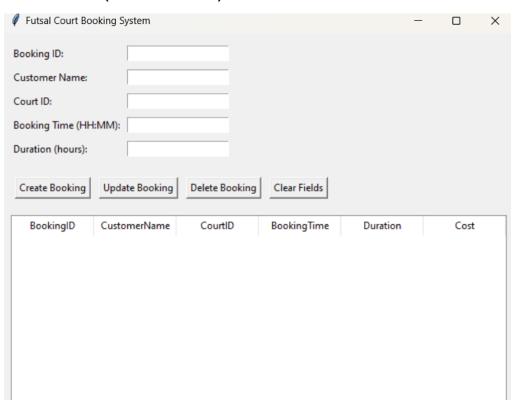

Result after run the program

Conditional Statement : Yes/ No

If, elif, & else

```python
        if choice == "1":
            create_booking()
        elif choice == "2":
            read_bookings()
        elif choice == "3":
            update_booking()
        elif choice == "4":
            delete_booking()
        elif choice == "5":
            calculate_totals()
        elif choice == "6":
            print("Exiting the system. Goodbye!")
            break
        else:
            print("Invalid choice. Please try again.\n")
```
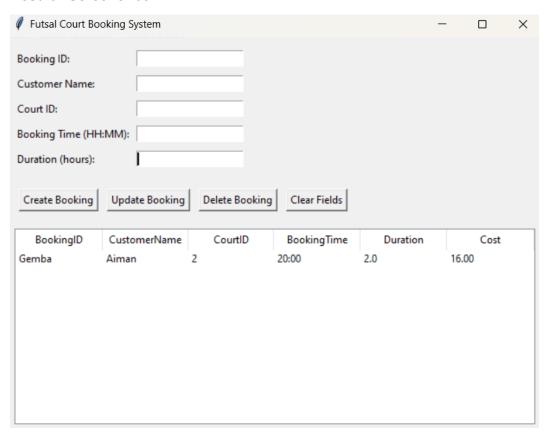
GUI : Yes / No (add screenshot)

Result : Screenshot

Strength:

1.File Handling - The initialize file function ensures the required file exists, creating it with a header if it does not. This is a good practice for preventing runtime errors.

2. Menu-Driven Interface - A clear and easy-to-navigate menu in the main function allows users to interact with the system intuitively.

3. Modular Design - Functions like create booking, read bookings, and others break the program into logical parts, making the code more readable and maintainable.

4. Booking Cost Logic - The implementation of a discount for bookings of 2+ hours is a nice touch and showcases practical business logic.

5. Error Handling for Missing Data - The script skips the header when calculating totals and averages to avoid processing non-data rows.

6. Readability - Clear variable names and comments make it easy to understand the purpose of each part of the code.

Kaizen (Room for improvement)

1.Input validation - Ensure user inputs are valid. For example :

- Check that booking id is unique when creating bookings.
- Validate duration and booking time formats.
- Prevent accidental overwrites by confirming actions (e.g., update/delete).

2. Error Handling - Add exception handling for file I/O operations to avoid crashes if the file is inaccessible or corrupted.

3. Performance Optimization - When updating or deleting bookings, reading and writing the file repeatedly can become slow for large files. Consider using in-memory data structures (like a list of dictionaries) to work with the data and save back to the file once done.

4. Data Validation - Ensure that the court id entered is valid. For example, maintain a list of available courts.

5. User Experience - Improve feedback by showing the details of a booking before confirming updates or deletions.

6. Enhance the Cost Calculation - Add additional logic for other discounts or peak/non-peak hour pricing.