

Part 4

Initial Connection and Main Menu:

```
C:\Users\zoe_M\Downloads\xyz_gym_project>python xyz_gym_system.py
Enter SQLite database filename (e.g., xyz_gym.db): xyz_gym.db
✓ Connected to xyz_gym.db

=== XYZ Gym Management ===
[1] Members
[2] Membership Plans
[3] Instructors
[4] Classes
[5] Attendance & Reports
[6] Equipment
[0] Exit
> |
```

Members Menu:

```
-- Member Menu --
[1] List Members
[2] Add Member
[3] Update Member
[4] Delete Member
[0] Back
> |
```

List members: Query 1

```
-- Member Menu --
[1] List Members
[2] Add Member
[3] Update Member
[4] Delete Member
[0] Back
> 1
{'memberId': 1, 'name': 'Alice Smith', 'email': 'alice@example.com', 'phone': '1234567890', 'address': '123 Elm St', 'age': 28, 'membershipStartDate': '2024-01-01', 'membershipEndDate': '2024-12-31'}
{'memberId': 2, 'name': 'Bob Johnson', 'email': 'bob@example.com', 'phone': '2345678901', 'address': '456 Oak St', 'age': 35, 'membershipStartDate': '2024-02-01', 'membershipEndDate': '2025-01-31'}
```

Add members: Query 2

```
[ Add Member ]
Name: Carla Sainz
Email: CSainz@example.com
Phone: 1234567
Address: 209 Pecul
Age: 34
Membership Start Date (YYYY-MM-DD): 2025-05-05
Membership End Date (YYYY-MM-DD): 2028-05-05
✓ Member added.
```

Delete Member: Query 4

```
-- Member Menu --
[1] List Members
[2] Add Member
[3] Update Member
[4] Delete Member
[0] Back
> 4
{'memberId': 1, 'name': 'Alice Smith', 'email': 'alice@example.com', 'phone': '1234567890', 'address': '123 Elm St', 'age': 28, 'membershipStartDate': '2024-01-01', 'membershipEndDate': '2024-12-31'}
{'memberId': 2, 'name': 'Bob Johnson', 'email': 'bob@example.com', 'phone': '2345678901', 'address': '456 Oak St', 'age': 35, 'membershipStartDate': '2024-02-01', 'membershipEndDate': '2025-01-31'}
{'memberId': 3, 'name': 'Carla Sainz', 'email': 'CSainz@example.com', 'phone': '1234567', 'address': '209 Pecul', 'age': 34, 'membershipStartDate': '2025-05-05', 'membershipEndDate': '2028-05-05'}
Enter Member ID to delete: 3
✓ Member deleted.
```

Expired Membership: Query 5

```
-- Member Menu --
[1] List Members
[2] Add Member
[3] Update Member
[4] Delete Member
[5] Show Expired Memberships
[0] Back
> 5

-- Members with Expired Memberships --
1 | Alice Smith | alice@example.com | Ends: 2024-12-31
2 | Bob Johnson | bob@example.com | Ends: 2025-01-31

-- Member Menu --
```

Class Menu:

```
-- Class Menu --
[1] List Classes
[2] Add Class
[3] Update Class
[4] Delete Class
[5] Find Members by Class
[6] Attendance Count Per Class
[0] Back
```

List Class: Query 6

```
-- Class Menu --
[1] List Classes
[2] Add Class
[3] Update Class
[4] Delete Class
[5] Find Members by Class
[6] Attendance Count Per Class
[0] Back
> 1
{'classId': 1, 'className': 'Morning Yoga', 'classType': 'Yoga', 'duration': 60, 'classCapacity': 15, 'instructorId': 2, 'gymId': 1}
{'classId': 2, 'className': 'Evening HIIT', 'classType': 'HIIT', 'duration': 45, 'classCapacity': 10, 'instructorId': 1, 'gymId': 2}
```

Add Class:

```
-- Class Menu --
[1] List Classes
[2] Add Class
[3] Update Class
[4] Delete Class
[5] Find Members by Class
[6] Attendance Count Per Class
[0] Back
> 2
Class Name: Tilys Yoga
Type (Yoga/Zumba/HIIT/Weights): Yoga
Duration (min): 50
Capacity: 5
Instructor ID: 1
Gym ID: 4
✓ Class added.
```

Update Class:

```
-- Class Menu --
[1] List Classes
[2] Add Class
[3] Update Class
[4] Delete Class
[5] Find Members by Class
[6] Attendance Count Per Class
[0] Back
> 3
{'classId': 1, 'className': 'Morning Yoga', 'classType': 'Yoga', 'duration': 60, 'classCapacity': 15, 'instructorId': 2, 'gymId': 1}
{'classId': 2, 'className': 'Evening HIIT', 'classType': 'HIIT', 'duration': 45, 'classCapacity': 10, 'instructorId': 1, 'gymId': 2}
{'classId': 3, 'className': 'Tilys Yoga', 'classType': 'Yoga', 'duration': 50, 'classCapacity': 5, 'instructorId': 1, 'gymId': 4}
Class ID to update: 3
Name (Tilys Yoga): Tillys Yoga
Type (Yoga): Yoga
Duration (50): 60
Capacity (5): 6
Instructor ID (1): 1
Gym ID (4): 4
✓ Class updated.
```

Delete Class:

```
-- Class Menu --
[1] List Classes
[2] Add Class
[3] Update Class
[4] Delete Class
[5] Find Members by Class
[6] Attendance Count Per Class
[0] Back
> 4
{'classId': 1, 'className': 'Morning Yoga', 'classType': 'Yoga', 'duration': 60, 'classCapacity': 15, 'instructorId': 2, 'gymId': 1}
{'classId': 2, 'className': 'Evening HIIT', 'classType': 'HIIT', 'duration': 45, 'classCapacity': 10, 'instructorId': 1, 'gymId': 2}
{'classId': 3, 'className': 'Tillys Yoga', 'classType': 'Yoga', 'duration': 60, 'classCapacity': 6, 'instructorId': 1, 'gymId': 4}
Class ID to delete: 3
✓ Class deleted.
```

Attendance per class:

```
-- Class Menu --
[1] List Classes
[2] Add Class
[3] Update Class
[4] Delete Class
[5] Find Members by Class
[6] Attendance Count Per Class
[0] Back
> 6

-- Class Attendance --
1 | Morning Yoga | 1 attendee(s)
2 | Evening HIIT | 1 attendee(s)
```

Find Members by Class: Query 3

```
-- Attendance Reports --
[1] Attendance Count Per Class
[2] Find Members by Class
[0] Back
> 2
Enter Class ID: 2

-- Members in Class 2 --
2: Bob Johnson
```

Classes taught by a specific instructor: Query 6

```
-- Attendance Reports --
[1] Attendance Count Per Class
[2] Find Members by Class
[3] Instructor's Classes
[4] Average Age by Membership Status
[5] Top 3 Instructors by Class Count
[6] Members Attended All of a Class Type
[7] Members Attended in Last Month
[0] Back
> 3
Enter Instructor ID: 2

-- Classes Taught by Instructor --
Sarah Coach | 4445556666 | Morning Yoga | Yoga | 60 mins | Capacity: 15
```

Average age of active vs expired members: Query 7

```

-- Attendance Reports --
[1] Attendance Count Per Class
[2] Find Members by Class
[3] Instructor's Classes
[4] Average Age by Membership Status
[5] Top 3 Instructors by Class Count
[6] Members Attended All of a Class Type
[7] Members Attended in Last Month
[0] Back
> 4

-- Average Age by Membership Status --
Expired: 31.50 years

```

Top 3 instructors by class count: Query 8

```

-- Attendance Reports --
[1] Attendance Count Per Class
[2] Find Members by Class
[3] Instructor's Classes
[4] Average Age by Membership Status
[5] Top 3 Instructors by Class Count
[6] Members Attended All of a Class Type
[7] Members Attended in Last Month
[0] Back
> 5

-- Top 3 Instructors by Number of Classes --
Sarah Coach teaches 1 classes
John Trainer teaches 1 classes

```

Members who attended all classes of a type: Query 9

```

-- Attendance Reports --
[1] Attendance Count Per Class
[2] Find Members by Class
[3] Instructor's Classes
[4] Average Age by Membership Status
[5] Top 3 Instructors by Class Count
[6] Members Attended All of a Class Type
[7] Members Attended in Last Month
[0] Back
> 6
Enter class type (e.g., Yoga, Zumba): Yoga

-- Members Who Attended All 'Yoga' Classes --
Alice Smith

```

Members who attended classes in the last month: Query 10

```
-- Attendance Reports --
[1] Attendance Count Per Class
[2] Find Members by Class
[3] Instructor's Classes
[4] Average Age by Membership Status
[5] Top 3 Instructors by Class Count
[6] Members Attended All of a Class Type
[7] Members Attended in Last Month
[0] Back
> 7

-- Members Attending Classes in the Last Month --
```

Equipment Management:

List equipment:

```
-- Equipment Menu --
[1] List Equipment
[2] Add Equipment
[3] Update Equipment
[4] Delete Equipment
[0] Back
> 1
{'equipmentId': 1, 'name': 'Treadmill', 'type': 'Cardio', 'quantity': 5, 'gymId': 1}
{'equipmentId': 2, 'name': 'Dumbbells', 'type': 'Strength', 'quantity': 10, 'gymId': 1}
{'equipmentId': 3, 'name': 'Yoga Mats', 'type': 'Flexibility', 'quantity': 20, 'gymId': 2}
-- Equipment Menu --
```

Add Equipment:

```
-- Equipment Menu --
[1] List Equipment
[2] Add Equipment
[3] Update Equipment
[4] Delete Equipment
[0] Back
> 2
Name: Barbell
Type (Cardio/Strength/Flexibility/Recovery): Strength
Quantity: 4
Gym ID: 3
```

Update Equipment:

```
-- Equipment Menu --
[1] List Equipment
[2] Add Equipment
[3] Update Equipment
[4] Delete Equipment
[0] Back
> 3
{'equipmentId': 1, 'name': 'Treadmill', 'type': 'Cardio', 'quantity': 5, 'gymId': 1}
{'equipmentId': 2, 'name': 'Dumbbells', 'type': 'Strength', 'quantity': 10, 'gymId': 1}
{'equipmentId': 3, 'name': 'Yoga Mats', 'type': 'Flexibility', 'quantity': 20, 'gymId': 2}
{'equipmentId': 4, 'name': 'Barbell', 'type': 'Strength', 'quantity': 4, 'gymId': 3}
Equipment ID: 4
Name (Barbell): Barbel
Type (Strength): Strength
Quantity (4): 3
Gym ID (3): 3
✓ Equipment updated.
```

Delete Equipment:

```
-- Equipment Menu --
[1] List Equipment
[2] Add Equipment
[3] Update Equipment
[4] Delete Equipment
[0] Back
> 4
{'equipmentId': 1, 'name': 'Treadmill', 'type': 'Cardio', 'quantity': 5, 'gymId': 1}
{'equipmentId': 2, 'name': 'Dumbbells', 'type': 'Strength', 'quantity': 10, 'gymId': 1}
{'equipmentId': 3, 'name': 'Yoga Mats', 'type': 'Flexibility', 'quantity': 20, 'gymId': 2}
{'equipmentId': 4, 'name': 'Barbel', 'type': 'Strength', 'quantity': 3, 'gymId': 3}
Equipment ID to delete: 4
✓ Equipment deleted.
```

Exit Program:

```
=== XYZ Gym Management ===
[1] Members
[2] Membership Plans
[3] Instructors
[4] Classes
[5] Attendance & Reports
[6] Equipment
[0] Exit
> 0
Goodbye!
```