Yameen Khalid

CIS 344

The purpose of this project was to design and build a database for an online career coaching platform. The system is meant to store and organize important information about clients, coaches, coaching sessions, payments, and reviews. By having all this data in one place, it becomes easier to schedule sessions, track payments, and keep a record of client feedback.

This project focused on creating a database with the following main parts:

* **Clients:** stores each client’s basic info such as name, email, and phone number.
* **Coaches:** keeps track of coaches, their specializations, and years of experience.
* **Sessions:** records meetings between clients and coaches, including date, time, duration, and a meeting link.
* **Payments:** tracks how clients pay for sessions, the payment method, amount, and whether it’s completed.
* **Reviews:** allows clients to leave a rating and comment after a session.

An **ER diagram** was created to show how the different tables connect. Each client can book many sessions, and each coach can run many sessions. Every session can have one payment and one review. The diagram made it easier to plan out the relationships and make sure everything was linked correctly before building the tables.

The database was created in MySQL Workbench using forward engineering. The script includes:

* Tables for Client, Coach, Session, Payment, and Review.
* **Primary keys** like ClientID and CoachID to uniquely identify records.
* **Foreign keys** to connect the tables (for example, a session links to both a client and a coach).
* Constraints such as unique emails for clients, and making sure one session can only have one payment.
* Some sample data inserts and a test query to check that the joins between tables work correctly.

One challenge was picking the right data types for certain fields. For example, deciding whether to store years of experience as a number or as text. Another challenge was setting up the foreign key relationships correctly so the tables stayed linked without errors. At first, the script had small issues, but after adjusting the constraints, everything worked.

The database was successfully created, and all tables were linked correctly. Sample data was added to test the relationships. A test query that joins across multiple tables showed the expected results, like which client booked which coach, how much they paid, and what review they left. This confirmed that the database works the way it was designed.

This project showed how to plan, design, and implement a working relational database. It covered everything from creating an ER diagram to writing the SQL script and testing the system. The final result is a database that can be used as the foundation for an actual online career coaching platform. It not only helped me practice database skills but also gave me a clear picture of how data connects in real applications.