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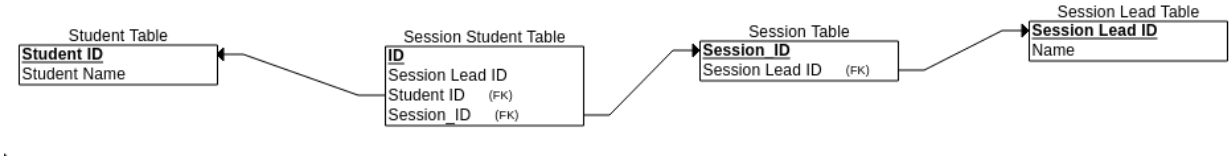
Explain your choices for the Udacity Hub Architecture regarding:
1. The tables and the fields that are needed to achieve the required functionality

Answare: Tables that is required will be :
1- Session lead table (which contain : session lead ID and session lead name)
2- Session table (which contain: session ID, Session data, And session lead ID)
3- Student table (which contain: student ID, and student name)
4- Session_student table (which contain: student ID and session lead ID, Session ID)

2. The relationships between the tables
Answare:



PRACTICAL
1. Create a migration file with the required SQL statements for creating the tables.
Answare:
First migrate the Student Table:
npx db-migrate create student_table –-sql-file

In the Migration up file :
CREATE TABLE IF NOT EXISTS student_table (
student_ID SERIAL PRIMARY KEY,
student_name VARCHAR(100),
);

In the Migration down file :
DROP TABLE IF EXISTS student_table;

2- migrate the Student Table:
npx db-migrate create session_student_table –-sql-file

In the Migration up file :
CREATE TABLE IF NOT EXISTS session_student_table (
ID SERIAL PRIMARY KEY,
Session _Lead_ID INTEGER REFERENCES session_lead_table(session_lead_ID) ON DELETE CASCADE,
Student_ID INTEGER REFERENCES student_table(student_ID) ON DELETE CASCADE,
Session _ID INTEGER REFERENCES session_table(session_ID) ON DELETE CASCADE
);

In the Migration down file :
DROP TABLE IF EXISTS session_student_table;

3- migrate the Student Table:
npx db-migrate create session_table –-sql-file

In the Migration up file :
CREATE TABLE IF NOT EXISTS session_table (
session_ID SERIAL PRIMARY KEY,
Session _Lead_ID INTEGER REFERENCES session_lead_table(session_lead_ID) ON DELETE CASCADE,
);

In the Migration down file :
DROP TABLE IF EXISTS session_table;

4- migrate the session_lead_table:
npx db-migrate create session_lead_table –-sql-file

In the Migration up file :
CREATE TABLE IF NOT EXISTS session_lead_table (
session_lead_ID SERIAL PRIMARY KEY,
session_lead_name VARCHAR(100),
);

In the Migration down file :
DROP TABLE IF EXISTS session_lead_table;

2. Create the needed SQL statements for the CRUD operations:

1- Insert:
INSERT INTO (table Name) (columes) VALUES (values);

2- Read:
SELECT (may be all) FROM (table Name);

3- Delete:
DELETE FROM (table name) where (condition);
4- update:
UPDATE (table name) SET (column = value) WHERE (condition);