**Chapter 4 – Team Project: Initial Mapping to Tables for Images and Photography Studio.**

**Step 4.1 - Map the E-R Diagram developed at the end of Chapter 3 to a relational schema, using the guidelines presented in Section 4.7 and Figure 4.7 of the textbook.**

The E-R diagram shown in Figure S.3.3 showed the strong entities Client, Emergency Contact, Inquiry, Order, Payment, Photography Package, Staff, Total Appointments, Weekly Schedule.

The strong entities map to the following tables. Note that we have replaced composite attributes by their simple components, and we have underlined primary keys. Although it is not necessary, it is customary to list the primary keys as the first columns in the tables.

**Client:**

Client (ID, firstName, lastName, street, city, state, zip, email, phone number, company name, feedback, signature.)

**Emergency Contact:**

Emergency Contact Name, Emergency Contact Email, Emergency Contact Phone Number

**Inquiry:**

Inquiry ID (Primary Key), Inquiry Date, Event Date, Event Location, Event (No of Guests), Event Start Date, Event Start Day, Event Time, Event Type, Photographer Availability, Preferred Photographer, Price Expectations, Services Provided, Status of Order.

**Order:**

Order ID(Primary Key), Order Date, Order Status, Client ID (Foreign Key referencing Entity Client)

**Payment:**

Payment Id(Primary key), Payment Amount, Payment Date, Payment Method, Payment Remainder Email, Payment Remainder, Phone Number, Payment History, Payment History Amounts, Payment History Date, Late Payment Fee, Confirmation ID

**Photography Package:**

Package Type

**Staff:**

Staff Assigned ID (Primary Key), Staff Assigned Name, Staff Assigned Email, Staff Assigned Phone Number, Staff Assigned Batch Number

**Total Appointments:**

Total Appointments

**Weekly Schedule:**

Weekly Date (Composite Primary Key with Weekly Day), Weekly Day (Composite Primary Key with Weekly Date), Weekly Time Slots

The relationship sets are Owns a, Books a, has a, assigned to, proffered by, consists, authenticates, contains, provides, has detailed, through, holds.

The one-to-many “owns a“ will be represented by foreign key, therefore we need to put client\_id in the inquiry, meeting, booking tables calling them “ownsaclient\_id” which together will form a foreign key indicated by italics in the schema shown below in boldface.

The one-to-many “books” will be represented by foreign key, therefore we need to put bookingdate in the inquiry table, totalappointments and weekly schedule tables.

The one-to-many “has-a”, represented as photographer has a many booking per schedule. The table Inquiry table has phographer availability.

The one-to-one “Preferredby”, represented as Booking has job which has many to many relations “authenticates” many payements with the clients, which “contains” many proofs, and which “provides” many orders.

The one-to-many “hasdetailed”, represented as packagemenu has many orders.

The single order “holds” many ordered items through single proofs. This is one-to-many relationship.

**The resulting tables in the conceptual level relational schema are the following:**

Client (clientId, firstName, lastName), street, city, state, zip, areaCode, phoneNumber)

Meeting (clientId, meetDate, meetTime, repName)

Photographer (empId, firstName, lastName, street, city, state, zip, areaCode, number)

Booking (clientId, bookingDate, bookingTime, duration, type, empId1, empId2)

PackageMenu (packageNo, numWallet, albumType, albumPages, albumCover, price)

Job (contractNo, type, eventName, location, clientId , date, time, duration, cost, empId1, empId2, packageNoChosen, totalCost, amtPaid, amtDue)

Proof (contractNo, proofNo, quality)

Order (orderNo, dateOrdered, totalAmount, packageNoOrdered, contractNo)

OrderItem (orderNo, proofNo, size, quantity, dateDelivered)

Payment (contractNo, datePaid, payType, amount)

Emergency Contact (Clientid, eventid, Emergencyfirstname, Emergencylastname, Emergencyphonenumber)

By the above entities the Primary key and foreign Key are clientid, empid, packageno, contractno, orderno, proofno.

**Tables:**

Inquiry table consists of data like client and meeting information.

Order table consists of data like Order and Orderitems information.

Payment table consists of data like contract details, payment made on event information

Event table consists of data like booking details, Contract details and photography staff details information.

Weekly schedule table consists of data like all booking information and client details.

Package Order form table consists of data like packageno, clientid, orderid and package selected by client.

Client report form table consists of data like clients details and feedback on happened event and services provided.

We note that the primary keys of client, Order and Package details consist of two or more-character string attributes. We observe that it becomes burdensome to include these multiple attributes when we use them as foreign keys. We will address this issue in a later chapter.

ER DIAGRAM:

A diagram of a function

Description automatically generated

A diagram of a company

Description automatically generated

RELATIONAL SCHEMA:

A screenshot of a computer program

Description automatically generated