**SQL Task 1**

**Que. Create a new database. There should be 3 table**

1. **Primary table (2 Foreign Key)**
2. **Child table (Each will contain Primary key)**

**Database : School**

**Table 1: Student**

There are 9 column in student table:

* **stu\_id:** This column is declared as SERIAL, which means it's a serial data type that automatically generates unique integer values as a primary key for each new row inserted.
* **stu\_name:** This column stores the student's name as a varchar with a maximum length of 150 characters. It's also declared NOT NULL to ensure a name is always provided.
* **stu\_age:** This column stores the student's age as an integer and is also declared NOT NULL.
* **stu\_PhoneNo:** This column stores the student's phone number as an integer. It allows null values.
* **stu\_DOB:** This column stores the student's date of birth as a date data type. It allows null values.
* **stu\_address:** This column stores the student's address as a varchar with a maximum length of 150 characters. It's declared NOT NULL to ensure an address is always provided.
* **stu\_class:** This column stores the student's class level as an integer. It allows null values.
* **stu\_sec:** This column stores the student's section (e.g., Sec A, Sec B) as a varchar with a maximum length of 50 characters. It allows null values.
* **stu\_RollNo:** This column stores the student's roll number as an integer. It allows null values.

This table structure effectively stores student information with proper data types.

**Table 2: Teacher**

* **teacher\_id:** This remains a SERIAL data type, automatically generating unique integer values as the primary key.
* **teacher\_name:** This is VARCHAR(150) with NOT NULL to ensure a name is always provided.
* **teacher\_phone\_number:** This is now INT to store phone numbers (modify if needed). It allows NULL values.
* **teacher\_joining\_date:** This is DATE to store joining dates. It allows NULL values.
* **teacher\_class:** This is VARCHAR(50) with NOT NULL to ensure a class assignment is always provided**.**

**Table 3: Class**

This table definition creates a class table with three columns:

**class\_id:** This is a SERIAL data type set as the primary key, ensuring unique identifiers for each class.

**section:** This is a VARCHAR(50) column to store the class section (e.g., Sec A, Sec B). It's declared NOT NULL to ensure a section is always provided.

**Foreign Keys:**

**The first FOREIGN KEY constraint references the student table's stu\_id column. This establishes a relationship where a class can have many students (one-to-many).**

**The second FOREIGN KEY constraint references the teacher table's teacher\_id column. This creates another one-to-many relationship where a class can have one teac**her.