DBMS-Class Hackathon

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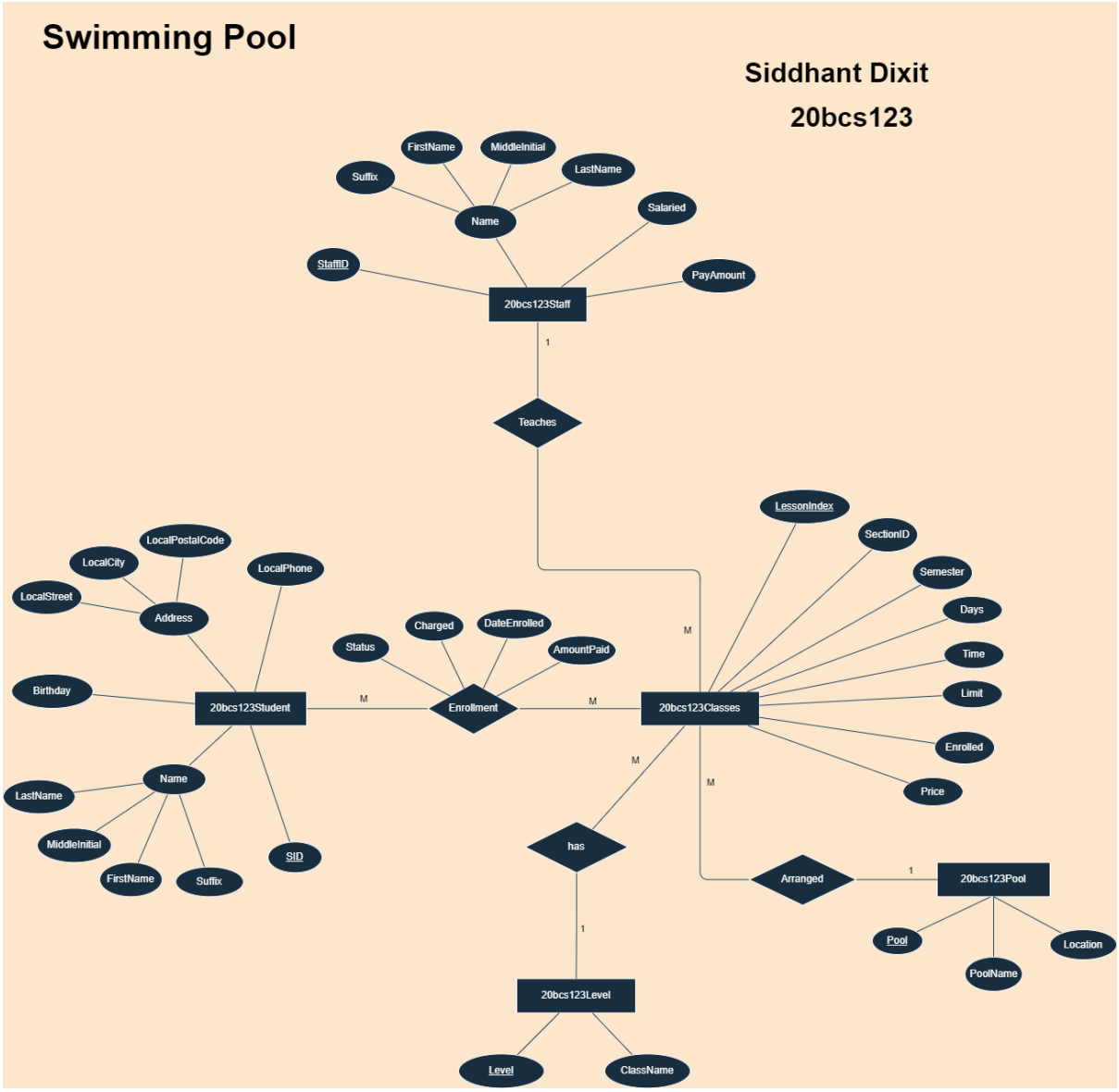
20bcs123

Conceptual Diagram

(Check the attached files for clear view)



Description

Here we have Student, Classes, Pool, Level, Staff as entity types

20BCS123_Levels (Level, ClassName)

20BCS123_Classes(LessonIndex, Level, SectionID, , Semester, Days, Time, Pool, Instructor, Limit, Enrolled, Price)

20BCS123_Pool (Pool, PoolName, Location)

20BCS123_Staff(StaffID, FirstName, MiddleInitial, LastName, Suffix, Salaried, PayAmount)

20BCS123_Enrollment(LessonIndex, SID, Status, Charged, AmountPaid, DateEnrolled)

20BCS123_Students(SID, FirstName, MiddleInitial, LastName, Suffix, Birthday, LocalStreet, LocalCity, LocalPostalCode, LocalPhone)

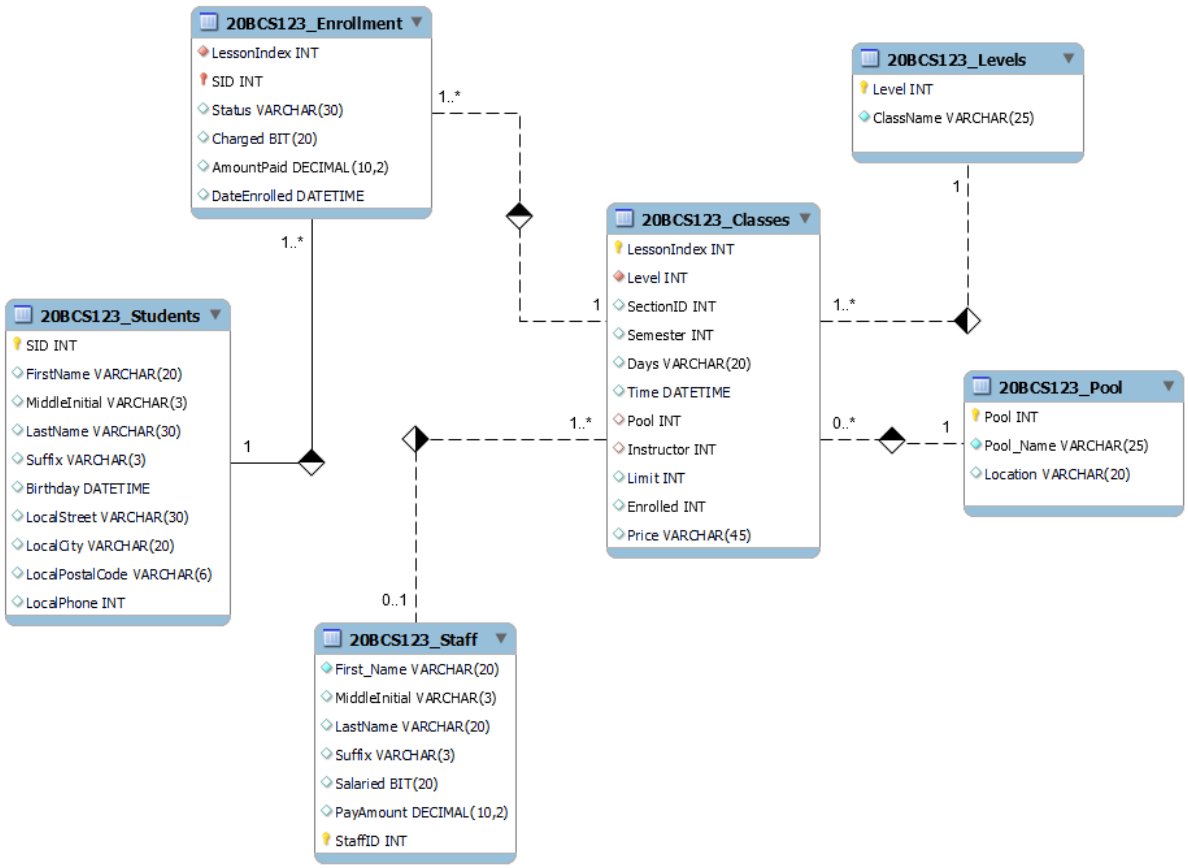
2. Degree and Cardinality

Relationships:

- Students-Class: Many to Many (Enrollments)
- Classes-Staff: Many to One
- Classes-Pool: Many to One
- Classes-Level: Many to One

3.

Physical Model



4. Weak Entity

20BCS123_Enrollment is a weak entity because it needs the foreign keys from its parents (20BCS123_Classes, 20BCS123_Students) to identify its instances. Another primary key cannot be added to this entity to make it strong as it can have NULL foreign keys without the existence of its parent instances and can violate data integrity.

5.

In this ER Diagram, there is no visible data redundancies as the only duplicate attributes present are foreign keys.