DBMS CLASS HACKATHON

04/02/22

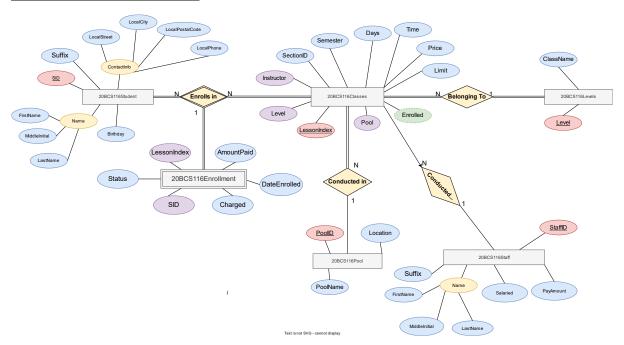
Name: Samuel Mathew

Roll no.: 20BCS116

Schema:

20BCS116 Student	
SID First Name Middle Initial Lastwame Suffix Birthday Loc	alStreet
Local City I male a scale	LegislPhage
Local City Local Postal Code Local Phone	
2-2-2-5	
20BCS Envollment	
Lesson Index SID Status Charged Amount Poid Date En	ivolled (
20BCS 116 Classes	
LessonEnder Level Section ID Semester Days Time Pool Instru	ictor Limit
1	
Envolled Price	/ ₂ = 50
	4
20BCSIIG Levels	
Level Class Name	
20BCS116P001	<u> </u>
Redia PoolName Location	
20BCS116 Staff	
Colore Calendary Calendary	it StaffID
Freshlame Middle Initial (Cashlame) Siffix Salaried PayAmoun	IC I STATE TO

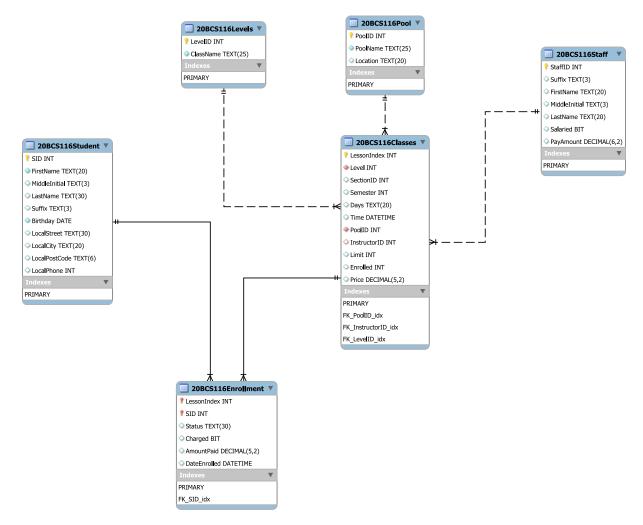
Conceptual Data Model:



"Enrolls in" is the only relationship with degree 3, rest all are 2.

- 1. **20BCS116Student** Keeps a record of personal information all the students, all of whom must enroll in at least one class. It has a Primary Key "SID".
- 2. **20BCS116Classes** Keeps a record of all the different swimming classes that are available for students to enroll in, and information pertaining to those classes. It has a Primary Key "LessonIndex" and derived attribute "Enrolled", which counts the number of students enrolled in the class.
- 3. **20BCS116Enrollment** Keeps a log of all enrollments by students into the different classes that has taken place. It has a Primary Composite Key "LessonIndex" and "SID", which are also Foreign Keys present primarily in 20BCS116Classes and 20BCS116Students respectively.
- 4. **20BCS116Levels** Keeps a record of the different levels. Has a Primary Key "LevelID".
- 5. **20BCS116Pool** Keeps a record of all the pools available in the facility. Has a Primary Key "PoolID".
- 6. **20BCS116Staff** Keeps a track of all the different instructors available to teach swimming and their personal information. Has "StaffID" as Primary Key.

Physical Data Model:



The only weak entity in this model is 20BCS116Enrollment.

This is because it does not have a Primary Key consisting of attributes of its own, but has 2 Foreign Keys taken together as its Primary Key. Therefore, the entity's existence depends on the existence of the other 2 entities. Remaining all entities are strong.

There is no data redundancy occurring in this model.

All the tables have the necessary and *relevant* information stored in them, and where there is a need, foreign keys are made use to reference data in other relations.