# DBMS Hackathon

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20BCS054

All the relationships in the above ERD diagram are binary relationships. The cardinality of these relationships is as follows:

- Students-Enrollment : One to Many
- Enrollment-Classes: Many to One
- Classes-Staff: Many to One
- Classes-Pool: Many to One
- Classes-Level: Many to One

**Degree of these relationships is 6 (Quaternary)**

- The only weak entity in this model is 20BCS054_Enrollment.
  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.

## Query

```
create database SwimmimgPool;
use SwimmingPool;
create table 54Levels (Levels int not null primary key,ClassName varchar(25));
```

```
create table 54Pool (Pool int not null primary key, PoolName
varchar(25),Location varchar(20));
create table 54Staff (FirstName varchar(20), MiddeName varchar(3),LastName
varchar(20),Suffix varchar(3),Salaried bit,PayAmount int ,StaffID int not null
primary key);
create table 54Classes(LessonIndex int not null primary key, Level int ,SectionID
int,Semester int ,Days varchar(20), Time datetime,Pool int,Instructor int,Limits
int,Enrolled int,Price int);
create table 54Enrollment(LessonIndex int ,SID int ,Status varchar(30),Charged
bit,AmountPaid int ,DateEnrolled datetime);
create table 54Students(SID int primary key,FirstName varchar(20),MiddleInitial
varchar(3),LastName varchar(30),Suffix varchar(3),BirthDay datetime,LocalStreet
varchar(30), Localcity varchar(20),LocalPostalCode varchar(6),LocalPhone int);
show tables;
```