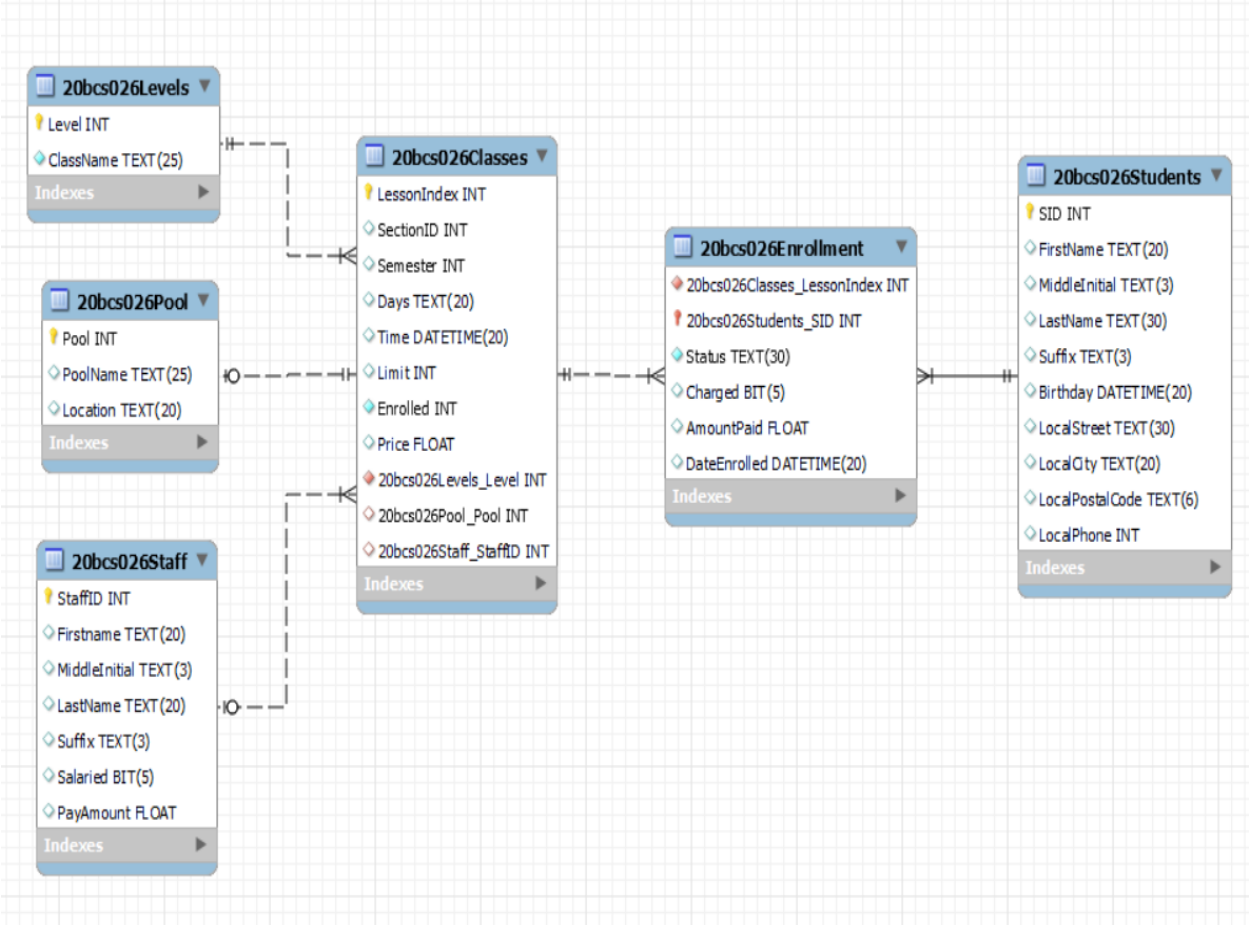
BADIGINCHALA CHANDANA PRIYA
20BCS026

DBMS FIRST TEST

Swimming Pool database entities and attributes:

- **Levels:** level, class name.
- **Pool:** pool name, location
- **Staff:** staff id, first name, middle initial, last name, suffix, salaried, pay amount
- **Classes:** lesson index, section ID, semester, days, time, limit, enrolled, price, level, pool, staff id.
- **Enrollment:** lesson index, student id, status, charged, amount paid, date enrolled.
- **Students:** student id, first name, middle initial, last name, suffix, birthday, local street, local city, local postal code, local phone.

ER Diagram:

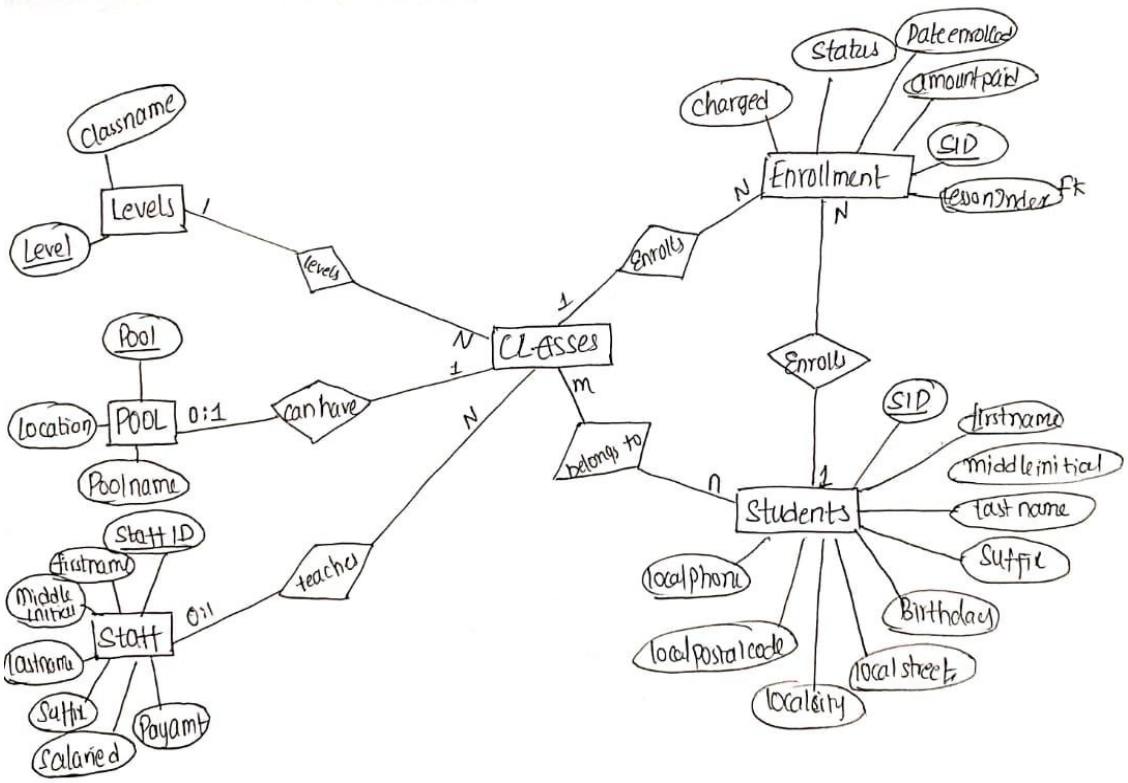


1.Description:

From above the entities or filled with respective attributes, primary keys are defined and the entities are related with others in one-to-one and one-to-many relationships.
All students or or related to classes such that they must be enrolled in at least one class, a class must have an existing level and a valid pool.
The staff entity is related to classes such that the staff may not have ever taught a class, but the level must always be associated with at least one class.

2.Cardinalities are mentioned in the following data model.

3.Physical data model



4. From the ER Diagram, there are no weak entities since all the classes have primary key.

5. Physical data model should have minimum scope for data redundancy.
The created ER diagram follows such a scope, since from the enrollment entity, a separate id is not maintained instead student Id, lesson index are created as foreign keys as well as primary key which helps to save database memory.