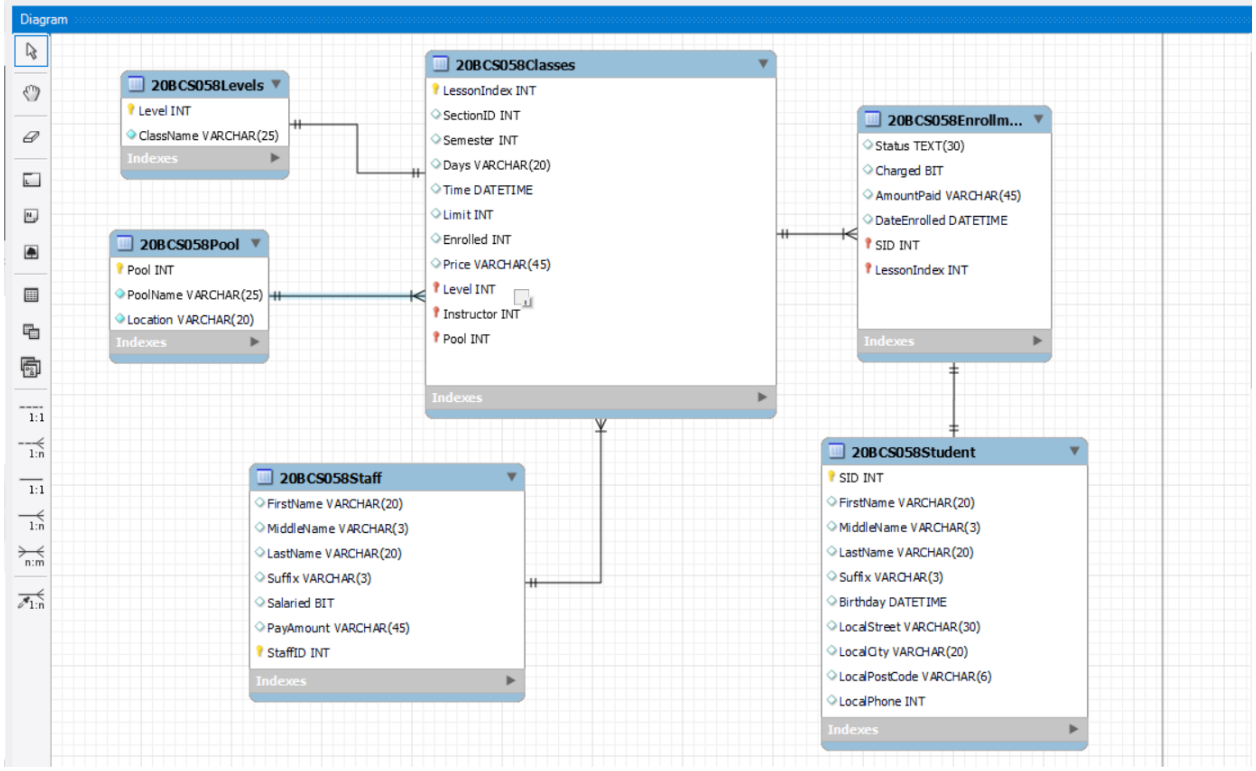
20BCS058
Hemant Dhawale

Q.1)



Description:

- Each level must have one class.
- Multiple classes can have the same pool.
- Each staff member can handle multiple classes.
- Each class can have multiple enrollment.
- One student must have only one enrollment.

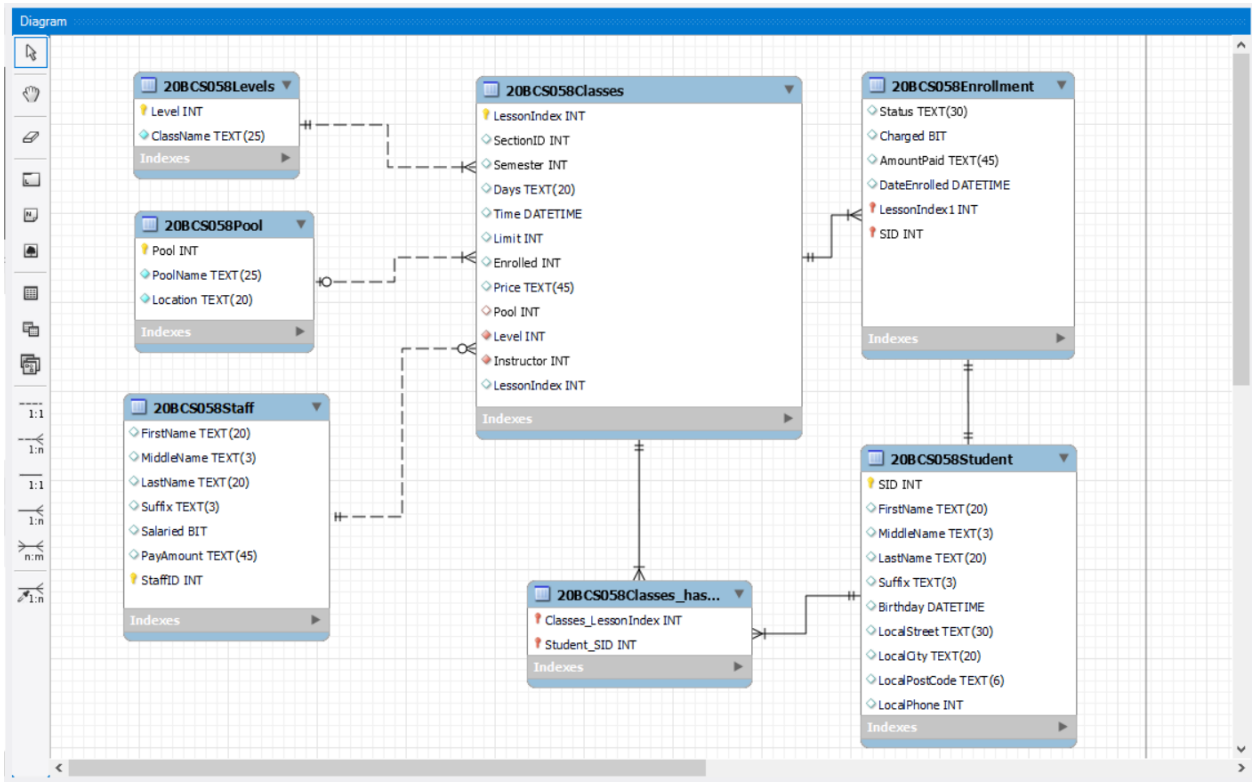
Q.2) Degree(20BCS058Levels)=2
Degree(20BCS058Pools)=3

Degree(20BCS058Staff)=7
Degree(20BCS058Enrollment)=6
Degree(20BCS058Classes)=11
Degree(20BCS058Students)=10

Cardinality:

20BCS058Levels	[one to one]	20BCS058Classes
20BCS058Pools	[one to many]	20BCS058Classes
20BCS058Staff	[one to many]	20BCS058Classes
20BCS058Enrollment	[many to one]	20BCS058Classes
20BCS058Enrollment	[one to one]	20BCS058Students

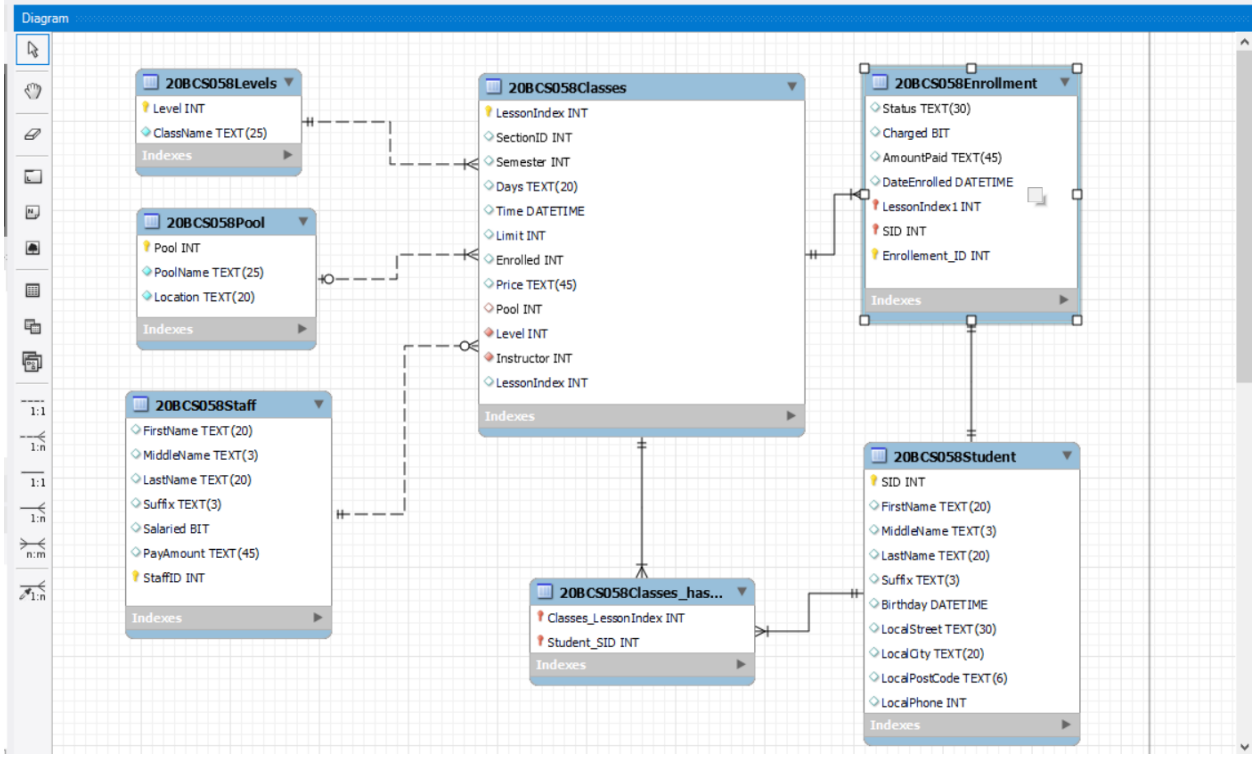
Q.3)



Description:

- A pool may or may not ever have a class.
- The levels table must always be associated with at least one class.
- The staff table may not ever have taught a class.
- The class must have students enrolled in it.
- The class must have a valid pool.
- The class may not have an instructor assigned.
- The class must have always be associated with an existing level.

Q.4) Weak entity: **20BCS058Enrollment** is the weak entity as it depends on **20BCS058Classes and 20BCS058Student** . It can be converted to a strong entity by adding a primary key. There should be a primary key with the name “**Enrollment_ID**”so that it can be converted into strong entity.



Q.5)**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