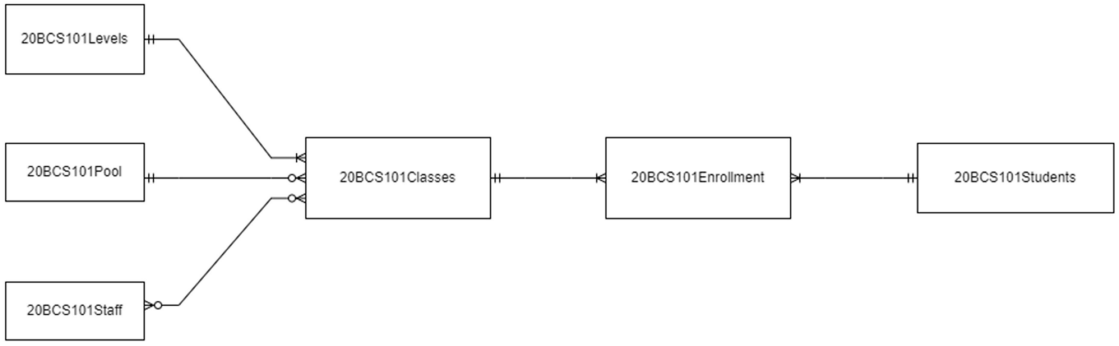
Hackathon

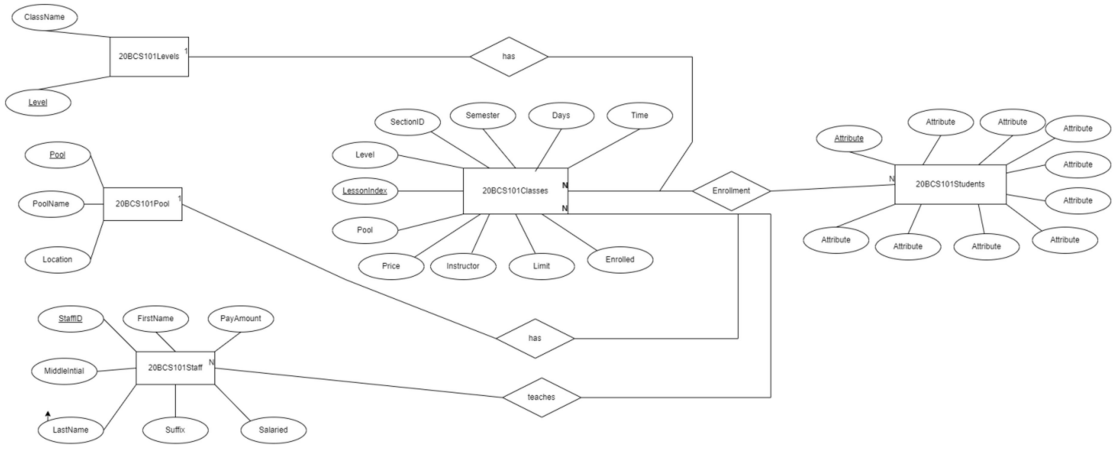
Course – CS310

Name - Prateek Agrawal
Roll No - 20BCS101
Date - 4th February, 2022

1)Conceptual Data Model (Crow Foot Notation):



Peter-Chenn Notation



Schema:

20BCS101Levels(Level, ClassName)

20BCS101Pool(Pool, PoolName, Location)

20BCS101Staff(Staff, FirstName, MiddleName, LastName, Suffix, Salaried, Payamount)

20BCS101Classes(Lessonindex, Level, Pool, Instructor, SectionID, Days, Time, Limit, Enrolled, Price)

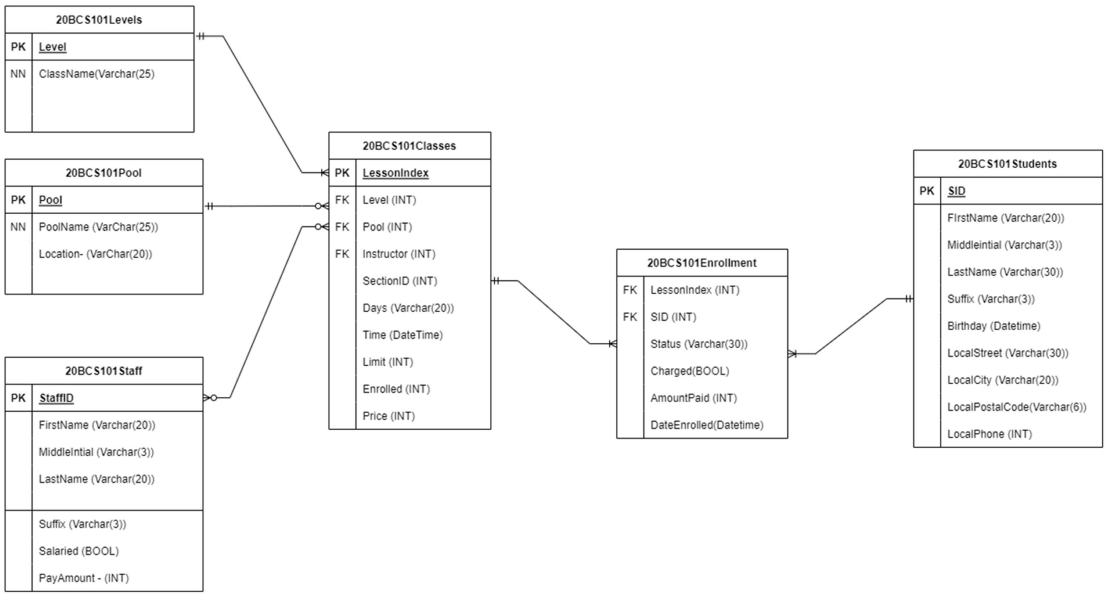
20BCS101Enrollment(Lessonindex, SID, Status, Charged, AmountPaid, DateEnrolled)

20BCS101Students(SID, FirstName, MiddleIntial, LastName, Suffix, Birthday, LocalStreet, LocalCity, LocalPostalCode, LocalPhone)

2)Degree and Cardinality:

20BCS101Staff	Optional 1-Optional Many	20BCS101Classes
20BCS101Pool	Mandatory 1-Optional Many	20BCS101Classes
20BCS101Levels	Mandatory 1-Mandatory Many	20BCS101Classes
20BCS101Classes	Mandatory 1-Mandatory Many	20BCS101Enrollment
20BCS101Enrollment	Mandatory Many- Mandatory 1	20BCS101Students

3) Physical Data Model:



4) 20BCS101Enrollment is a weak entity.

The table 20BCS101Enrollment relates 20BCS101Classes and 20BCS101Students and it does not have primary key so it is an associative entity which is actually a weak entity. We cannot make it a strong entity by adding a primary key as it will defeat the purpose of it acting as an m:n relation(associative entity) between class table and student table.

5) There is no Data redundancy in the schema. We can say this because there no same data attributes which are present in two separate tables.