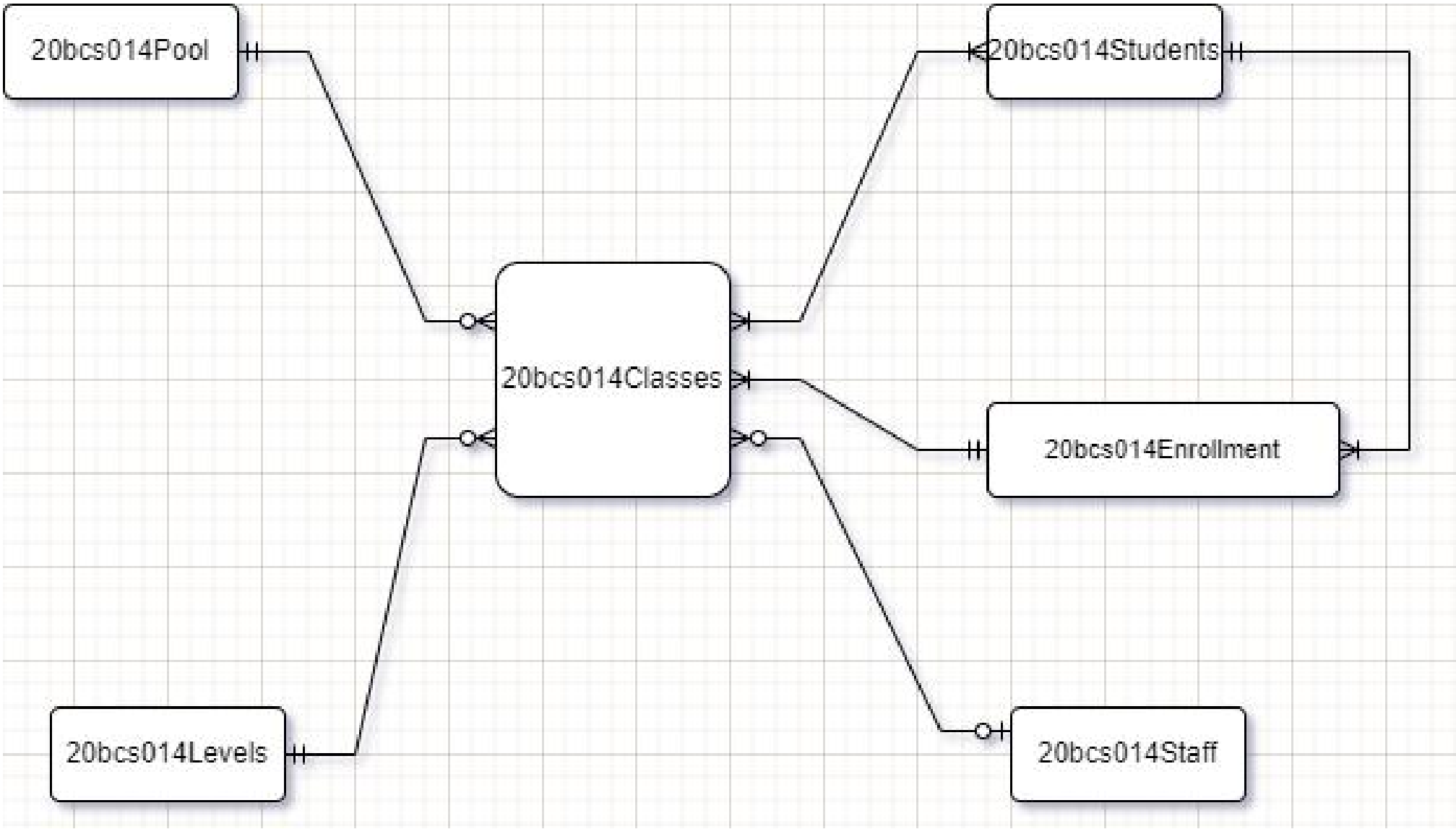


DBMS - Hackathon

Name: *Anant Terkar*

Roll.No.: *20bcs014*

1) Conceptual Model:



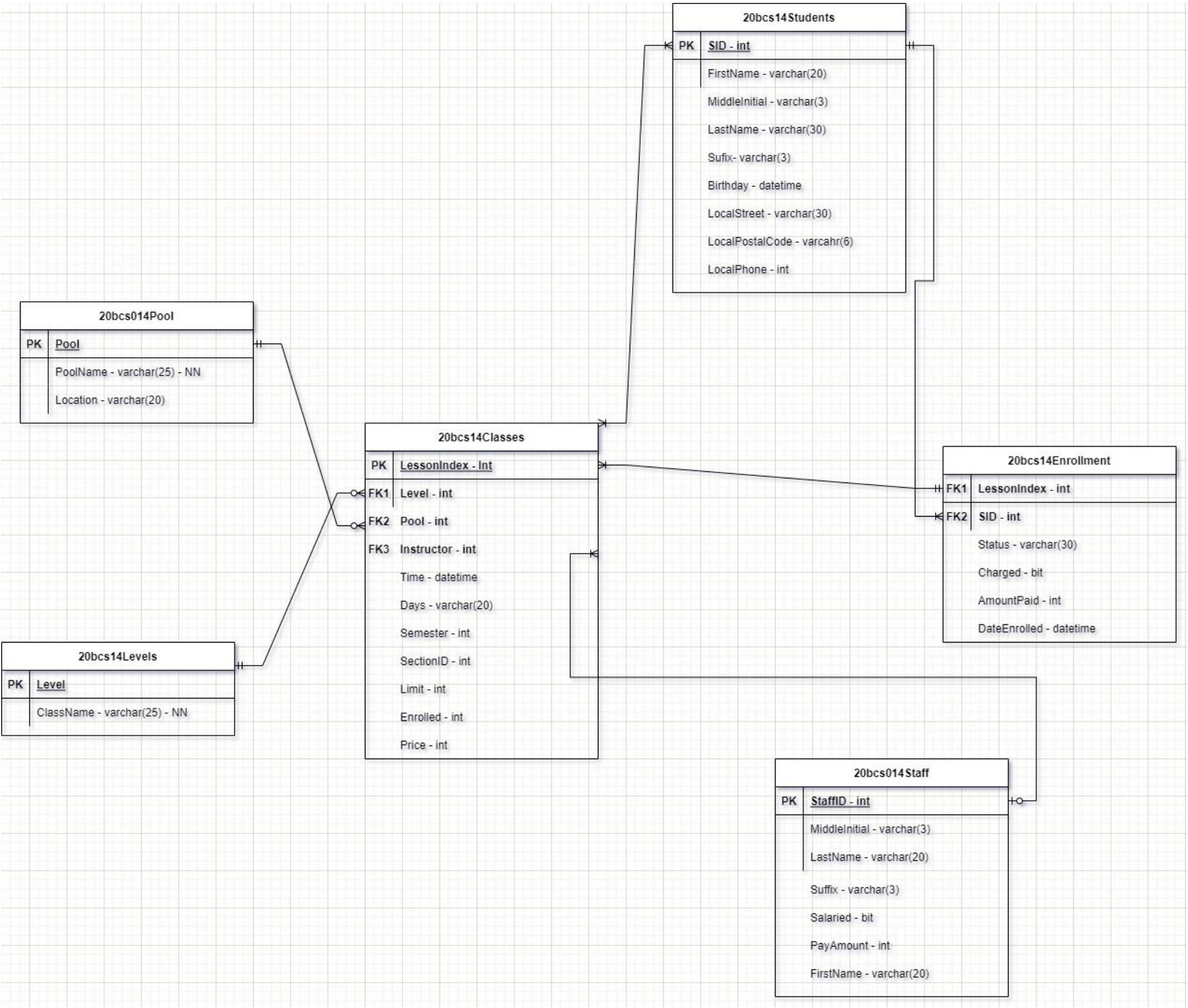
1.1) Schema :

20bcs014Levels(Level, ClassName)
20bcs014Pool(Pool, PoolName, Location)
20bcs014Staff(StaffID, FirstName, MiddleInitial, LastName, Suffix, Salaried, PayAmount)
20bcs014Classes(LessonIndex, Level, SectionID, Semester, Days, Time, Pool, Instructor, Limit, Enrolled, Price)
20bcs014Enrollment(LessonIndex, SID, Status, Charged, AmountPaid, DateEnrolled)
20bcs014Students(SID, FirstName, MiddleInitial, LastName, Suffix, Birthday, LocalStreet, LocalCity, LocalPostalCode, LocalPhone)

2) Degree and Cardinality:

| | | |
|--------------------|---------------------------------|--------------------|
| 20bcs014Levels | [one to optional many] | 20bcs014Classes |
| 20bcs014Pool | [one to optional many] | 20bcs014Classes |
| 20bcs014Students | [many to many] | 20bcs014Classes |
| 20bcs014Students | [one to many] | 20bcs014Enrollment |
| 20bcs014Enrollment | [one to many] | 20bcs014Classes |
| 20bcs014Staff | [one optional to optional many] | 20bcs014Classes |

3) Physical Model:



4) Identifying Weak Entities:

Enrollment is the only weak entity void of any primary key. Enrollment cannot exist without Students and Classes entity. Hence it is a weak entity.

20bcs014Enrollment cannot be made into a strong entity as adding a primary key would add redundancy to the database. At multiple places the same attribute would be stored. To avoid redundancy it is best that 20bcs014Enrollment is not make it a strong entity.

5) Redundancy:

There is no redundancy in the database.