

Ans 1

Shchema Diagram

20BCS130 Levels

Level	Class Name
-------	------------

20BCS130 Pool

Pool	Pool Name	Location
------	-----------	----------

20BCS130 Staff

First Name	Middle Initial	Last Name	Suffix	Salaried	Pay Amt	<u>staffID</u>
------------	----------------	-----------	--------	----------	---------	----------------

20BCS130 Classes

<u>Lesson Index</u>	Level	Section ID	Semester	Days	Time	Pool	Instructor	Limit	Enrolled	Price
---------------------	-------	------------	----------	------	------	------	------------	-------	----------	-------

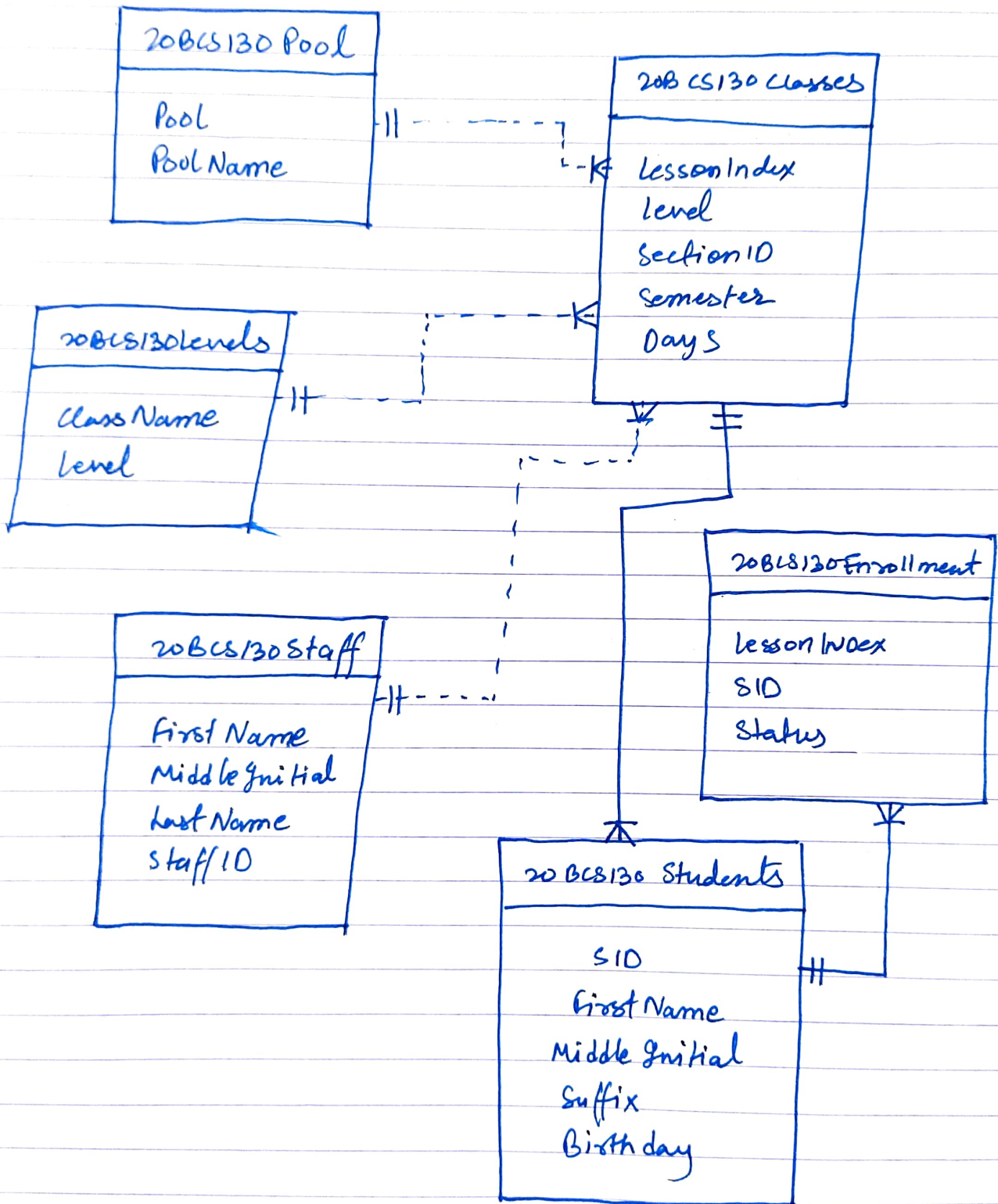
20BCS130 Enrollment

Lesson Index	<u>SID</u>	Status	Charged	Amount Paid	Date Enrolled
--------------	------------	--------	---------	-------------	---------------

20BCS130 Students

<u>SID</u>	First Name	Middle Initial	Last Name	Suffix	Birthday	Local Street	Local City	Local P/N	Phone
------------	------------	----------------	-----------	--------	----------	--------------	------------	-----------	-------

Conceptual Design



Ans 2

degree (Pool) = ~~2~~ 3

degree (levels) = 2

~~classes~~

degree (classes) = ~~5~~ 11

degree (Staff) = ~~4~~ 7

degree (Enrollment) = 6

degree (Students) = 10

The cardinality of all the entities are zero because currently there are no tuples inserted.

Ans 3

Screenshot as a pdf.

Ans 4

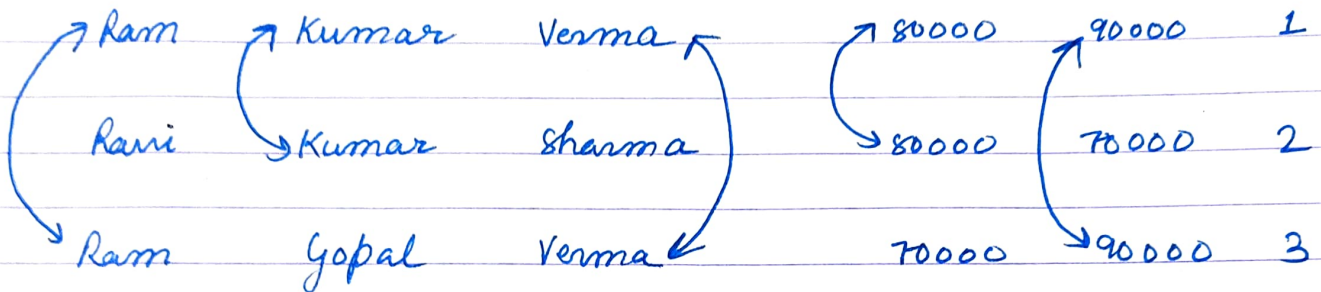
As it is clearly visible that each table has a primary key so each table can be identified individually. So each table is a Strong Entity.
Therefore there are no weak entities.

Ans 5

Ans 5 Consider the following case:

Staff

FirstName MiddleInitial LastName Suffix Salary Payment StaffID.



Here in this instance we can see that there is ~~are~~ data redundancy.

We can avoid these redundancies using Normalization.