

# DBL - LAB2

submitted by:

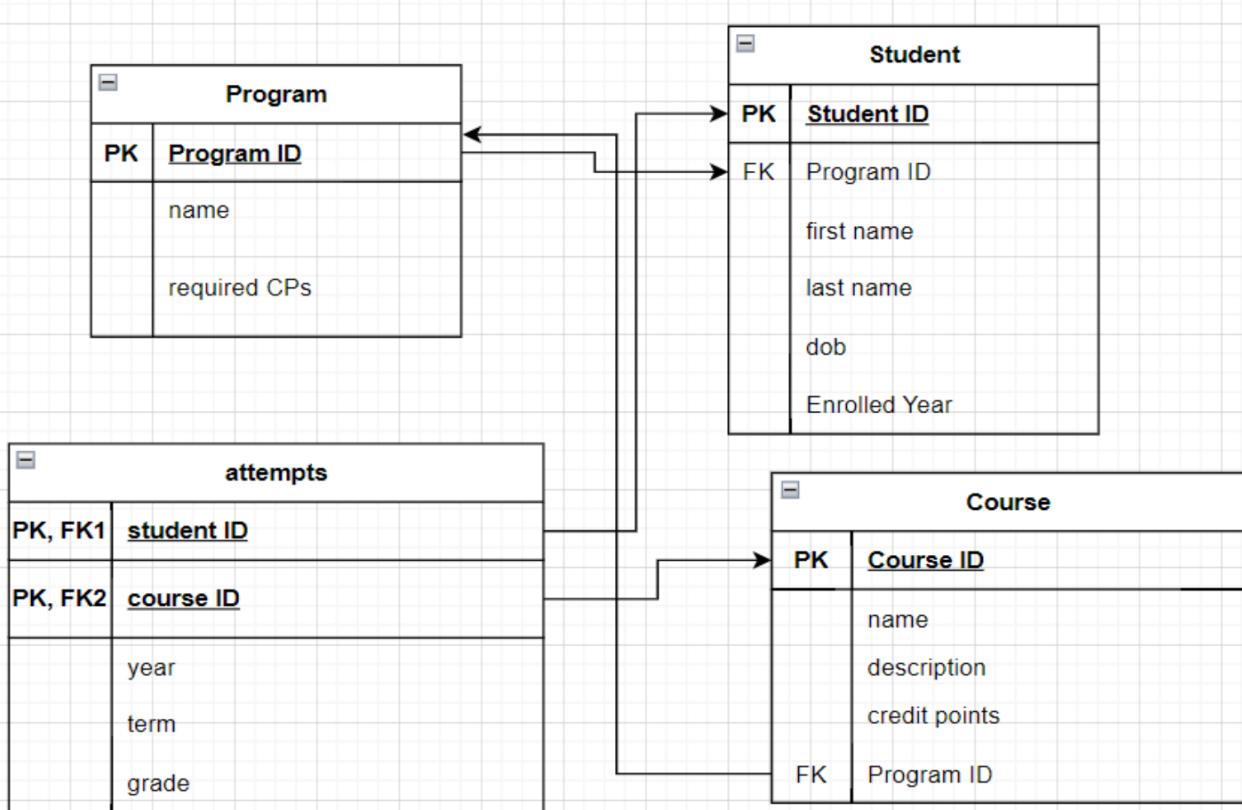
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MD Asibul Hasan Fahim

Assignment 1:

Task 1.1:



## task 1-2:

Program

<u>Program ID</u>	Name	Required CPs
203	IPE	90
550	CSE	60
610	IE	70

course

<u>course ID</u>	Name	Description	CPs	Program ID (FK)	Prerequisite
550	EE2	~	6	112	EE1
690	MA2	~	6	203	MA1
110	DB	~	6	510	—

student:

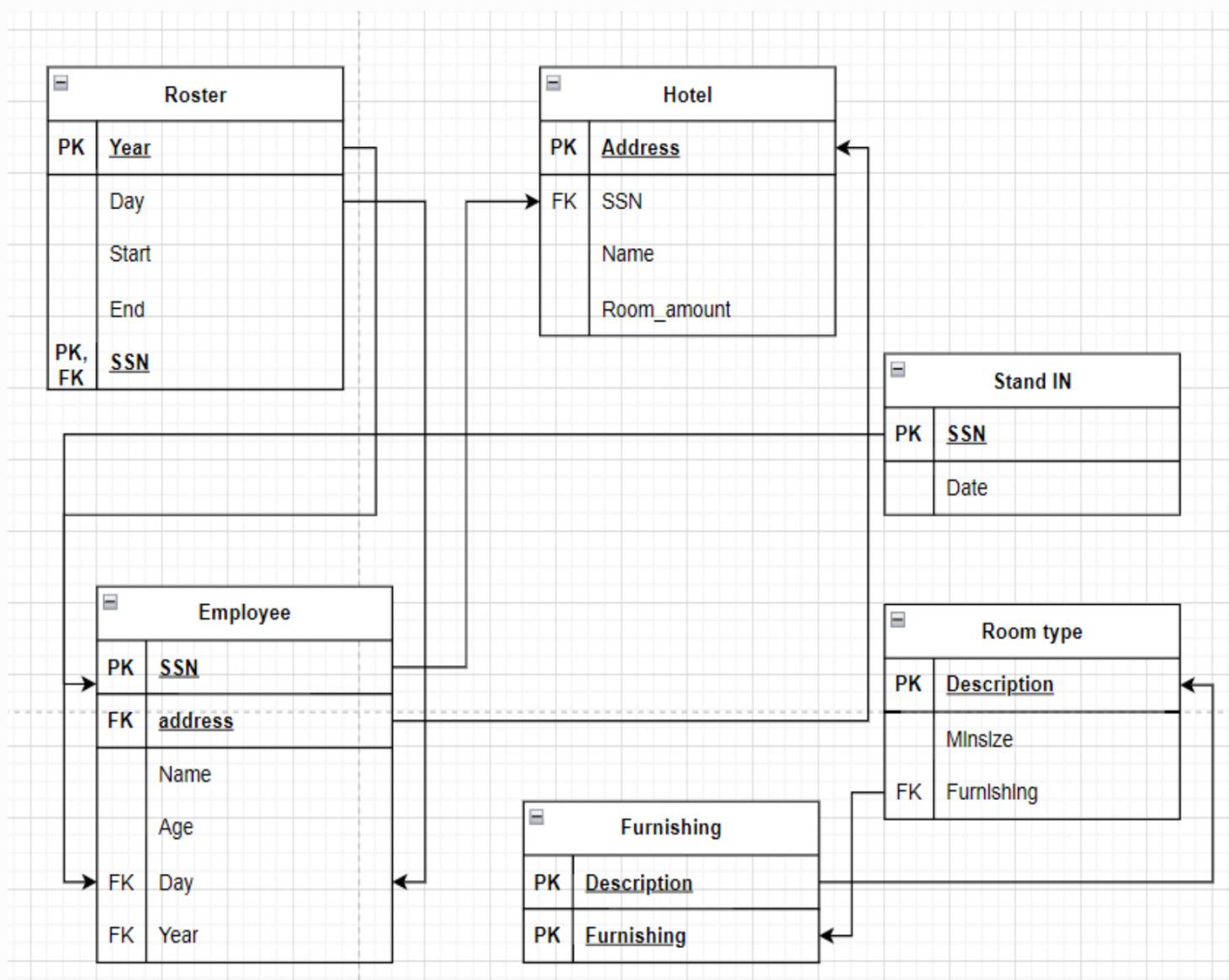
<u>student ID</u>	F.name	L.name	dob	Enrolled year	Program ID (FK)
121053	Osama	Vladimir		1988	203
121354	Bin	Putin		1991	550
101520	Laden	Jr.		2022	610

Attempts

Grade	Year	Term	<u>Student ID</u> (FK)	course ID (FK)
1	2020	3	151013	550

A	22		191	121011	160
B	1950	4			
A	1990	2	112233		556
C	2023	4	010101		610

## Assignment 2:



tack 3:

Ques.

3.1: Full functional dependencies are determined from the relationship model. So, at first we need to convert the above data into a relation model.

Lec ID	Prof. ID	Prof. Name	Lecture Name	Note ID	Price	Quantity
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Now, from here we can find its full functional dependency. A full functional dependency is a state of database normalization that equates to the normalization standard of second normal form (2NF). In brief, this means that it meets the requirements of First Normal form (1NF), and all non-key attributes are fully functionally dependent on the primary key. Now, the relational model above meets the requirements of first normal form (1NF) which is, each

attribute holding more than one atomic value. So, we can say that it is of First normal form (1NF).

However, it's not fall functional dependent as it does not meet the requirements of Second normal form (2NF). Which is all non-candidate key attributes must depend on the primary key.

3.2: The primary key is quantity, because every value of this now is unique-

3.3:

Lec ID	Prof. ID	NoteID	Quantity
24	47	5	12
24	272	1	15
24	251	5	17
25	47	3	19

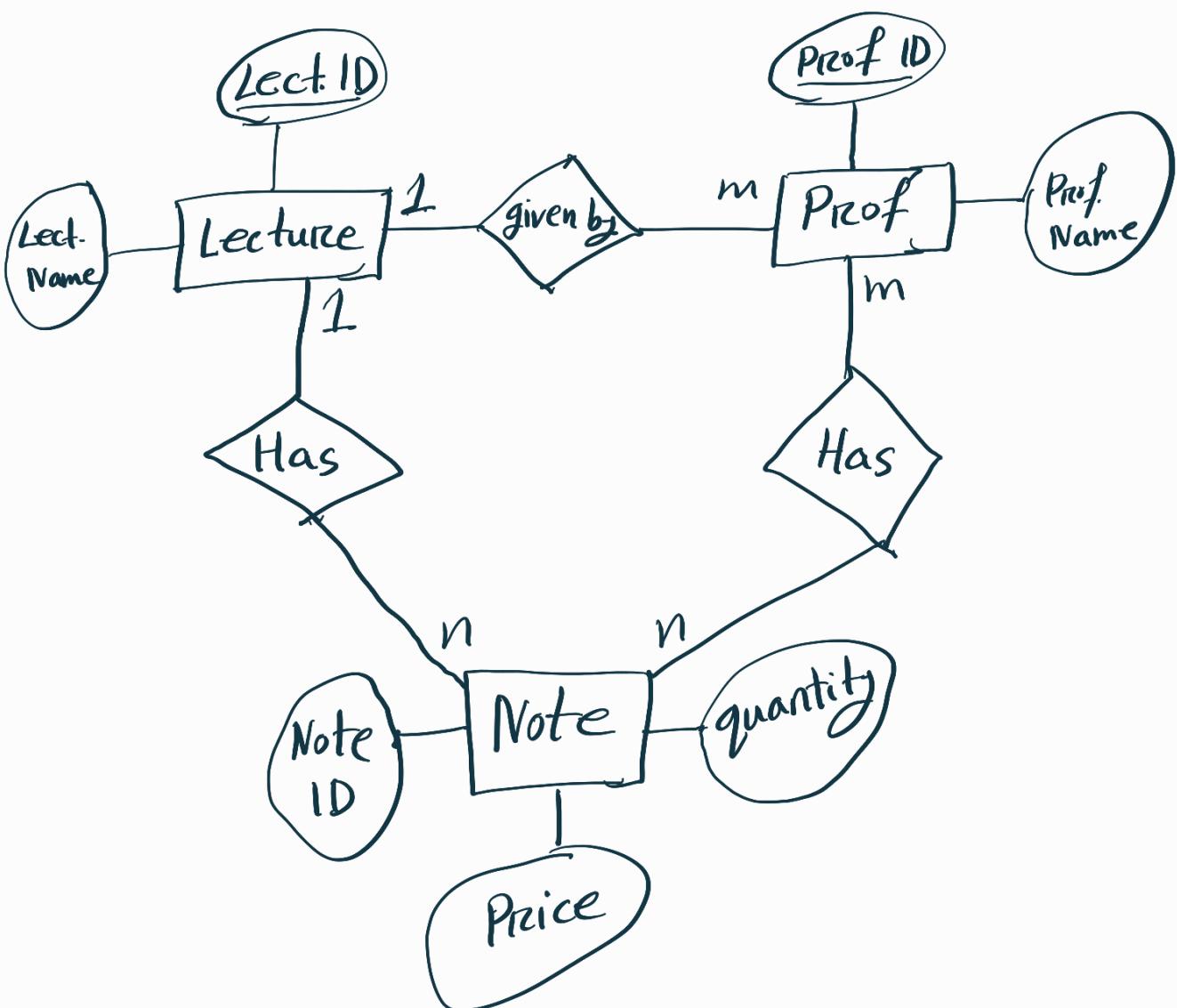
<u>Prof. ID</u>	Prof. Name
47	Miller
272	Adams
251	Meyers

<u>Note ID</u>	Price
5	32
1	35
3	22

<u>Lec. ID</u>	Lec. Name
24	DB
25	Java

3.9: 3NF is same as 2NF

3.5:



task 4

4.1: Select firstName, lastName From PLAYER, GAME Where

PLAYER.PID = GAME.winnerID

4.2: Select PID From PLAYER Where dob  
IN(

Select dob

From PLAYER Having COUNT(dob) >1 Group By dob

)

4.3: Select winnerID From GAME Where winnerID  
IN(

Select winnerID

From GAME Having COUNT(winnerID ) >1 Group By  
winnerID)