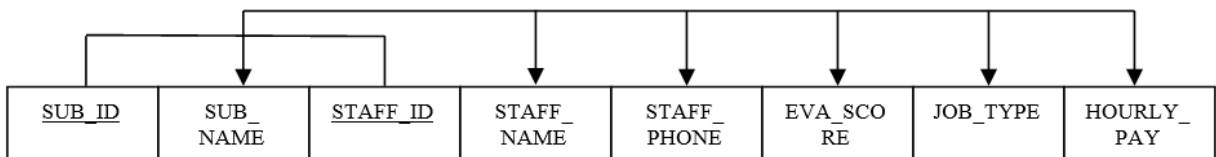# Lab 9

1. What is normalization? What are the advantages of normalization?

2. What is the normal form for the following table? Explain your answer.

Staff_ID	Staff_Name	Staff_Age	Course_Type	Hourly_Fees
x984562333	Patrick	24	IT	50
x159883489	Jessica	28	ENG	60
x889652783	Evon	23	IT	50
x456652673	Silvia	36	MGNT	30
x789734559	Terrance	32	ENG	60

3. Why in certain cases we need to perform de-normalization on database tables?

4. Given the initial dependency diagram as follows.

SUB_ID	SUB_NAME	STAFF_ID	STAFF_NAME	STAFF_PHONE	EVA_SCORE	JOB_TYPE	HOURLY_PAY

    i.   Identify partial and transitive (if any) dependencies from the diagram.

    ii.   Then normalize the dependency diagram into 3NF.

5. Demonstrate step-by-step on how to convert the figure below to 3NF.

| A | B | C | D | E | F | G | H |