


- 2) Suggest a new database design to handle the new situation.

Computer C (ComputerNbr, Manufacturer, Cost)
 Staff-Computer C (StaffNbr, ComputerNbr)

Question 02

An agency called istant cover supplies part-time / temporary staff to hotels within scotland. The table shows sample data, which lists the time spent by agency staff working at various hotels. The National Insurance Number (NIN) is unique for every member of staff

Partial Dependency



NIN	ContactNo	hours	eName	hno	hLoc
1135	C1024	16	SmithJ	H25	East Kilbride
1057	C1024	24	HocineD	H25	East kilbride
1068	C1025	28	WhiteT	H4	Glasgow
1135	C1025	15	Smith T	H4	Glasgow

Full dependency

Full dependency

transitive dependency

- Identify the functional dependencies represented by the attributes shown in the table. State any assumption you make about the data and the attributes shown in this table.
- Describe and illustrate the process of normalizing the table to 3NF. Identify primary and foreign keys in your relations.

1NF

<u>NIN</u>	contract No	hours	ename	hno	hLoc
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2NF

emp table

<u>NIN</u>	ename
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Contract

<u>NIN</u>	<u>contract no</u>	hours	hno	hLoc
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3NF

emp table

<u>NIN</u>	ename
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Contract

<u>NIN</u>	<u>contract No</u>	hours
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hotel

<u>hno</u>	hLoc
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Contract - hotel

<u>contract no</u>	<u>hno</u>
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Lab sheet 08

Date

No

Question 01

Each member of staff in ABC company is allocated a single computer. Information about computers belonging to staff members is planned to be stored in a database consisting of the following table.

HasComputer (staffNbr, ComputerNbr, Manufacturer, Cost)

Company policy subsequently changes, and some staff are allocated more than one computer. (Each computer is still assigned to a single member of staff?)

1) Explain why the above table design is not suitable for ABC Company.

Because that want to be an atomic (remove multivalued)

1NF - To be atomic

2NF - Partial and full dependancy

3NF - Transitive dependancy

1NF

<u>StaffNo</u>	<u>ComputerNo</u>	Manufacturer	Cost
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2NF

<u>CompterNo</u>	Manufacturer	Cost
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<u>StaffNbr</u>	<u>ComputerNbr</u>
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3NF → same