Question 01.

An agency called "INSTANTCOVER" supplies part-time/temporary staff to hotels throughout the country. The table below lists the time spent by agency staff working at two hotels. The National Insurance Number (NIN) is unique for employees. An employee signs a new contract for each hotel they are assigned. Describe and illustrate the process of normalizing this table to 3NF.

NIN	contractNo	hoursPerWeek	eName	hotelNo	hotelLocation
113567WD	C1024	16	John Smith	H25	Edinburgh
234111XA	C1024	24	Diane Hocine	H25	Edinburgh
712670YD	C1025	28	Sarah White	H4	Glasgow
113567WD	C1025	16	John Smith	H4	Glasgow

Question 02:

Put the below table in third normalized form.

SID = Student ID, S_Name= Student Name, CID = Course ID, C_Name = Course Name, Grade = Student's Grade in Course, F_Name = Faculty Name, F_Phone = Faculty Phone, FID=Faculty ID

SID	CID	S_name	C_name	Grade	FID	F_Name	F_phone
1	IS318, IS301	Adams	Database, EC	A, B	F001, F002	Howser, Langley	60192, 45869
2	IS318	Jones	Database	A	F001	Howser	60192
3	IS318	Smith	Database	B	F001	Howser	60192
4	IS301, IS318	Baker	EC, Database	A, B	F002, F001	Langley, Howser	45869, 60192

Question 03: Convert the below table into 3NF.

Table name: DATA_ORG_1NF   Database name: Ch06_ConstructCo

PROJ_NUM	PROJ_NAME	EMP_NUM	EMP_NAME	JOB_CLASS	CHG_HOUR	HOURS
15	Evergreen	103	June E. Arbough	Elect. Engineer	84.50	23.8
15	Evergreen	101	John G. News	Database Designer	105.00	19.4
15	Evergreen	105	Alice K. Johnson *	Database Designer	105.00	35.7
15	Evergreen	106	William Smithfield	Programmer	35.75	12.6
15	Evergreen	102	David H. Senior	Systems Analyst	96.75	23.8
18	Amber Wave	114	Annelise Jones	Applications Designer	48.10	24.6
18	Amber Wave	118	James J. Frommer	General Support	18.36	45.3
18	Amber Wave	104	Anne K. Ramoras *	Systems Analyst	96.75	32.4
18	Amber Wave	112	Darlene M. Smithson	DSS Analyst	45.95	44.0
22	Rolling Tide	105	Alice K. Johnson	Database Designer	105.00	64.7
22	Rolling Tide	104	Anne K. Ramoras	Systems Analyst	96.75	48.4
22	Rolling Tide	113	Delbert K. Joenbrood *	Applications Designer	48.10	23.6
22	Rolling Tide	111	Geoff B. Wabash	Clerical Support	26.87	22.0
22	Rolling Tide	106	William Smithfield	Programmer	35.75	12.8
25	Starflight	107	Maria D. Alonzo	Programmer	35.75	24.6
25	Starflight	115	Travis B. Bawangi	Systems Analyst	96.75	45.8
25	Starflight	101	John G. News *	Database Designer	105.00	56.3
25	Starflight	114	Annelise Jones	Applications Designer	48.10	33.1
25	Starflight	108	Ralph B. Washington	Systems Analyst	96.75	23.6
25	Starflight	118	James J. Frommer	General Support	18.36	30.5
25	Starflight	112	Darlene M. Smithson	DSS Analyst	45.95	41.4

Question 03: Produce the Third Normal Form of this document by normalization.

Order Form

Order number: 1234   Date: 11/04/98

Customer number: 9876

Customer name: Billy

Customer address: 456 HighTower Street

City–Country: Hong Kong, China

ProductNo	Desscription	Quantity	Unit Price
A123	Pencil	100	$3.00
B234	Eraser	200	$1.50
C345	Sharpener	5	$8.00