

Assignment

(Reducing the table into 1NF)

Table-1: Doctor's Detail

Doc No.	Name	Address
D1	Nadeem	Abc 123
D2	Nadeem	Kb13
D4	Erum	Ak123
D5	Hafeez	Nd123

Table-2: Contact-Details

Doc No.	Phone No.
D1	0333-123
D1	042-123
D2	0334-124
D2	0300-123
D4	0321-123
D5	0321-124

Table-3: Department-Details

Doc No.	Dept_id
D1	Neurology
D2	Orthopedic
D4	ENT
D4	Neurology
D5	Skin
D5	Orthopedic

Table-4: Charges

Doc No.	Designation	Charges
D1	Professor	5000
D2	Professor	5000
D4	Asst. Proff.	3000
D5	Asst. Proff.	3000

Table-5: Patient Details

Doc No.	Patient no.	Patient Name	CNIC	Patient Phn	Room No.	Room Type	Bed No.
D1	P1	Kahlid	12345-1	042-1	R2	Normal	B1
D1	P5	Ahmed	12345-2	042-2	R2	Normal	B1
D1	P7	Anum	12345-3	042-3	Nil	—	Nil
D2	P4	Mehmood	12345-4	042-4	R2	Two Bed	B5
D2	P7	Anum	12345-3	042-3	R4	Two Bed	B7
D2	P9	Khawar	12345-6	042-5	R4	—	Nil
D4	P10	Banweer	12345-7	042-6	Nil	—	Nil
D4	P1	Khalid	12345-1	042-1	R5	Special	B8
D5	P12	Sohail	12345-9	042-8	Nil	—	Nil
D5	P13	Ahmed	12346-0	042-9	R6	Special	B9

Assumming:

Table-1:

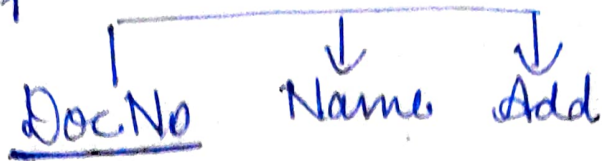


Table-2:

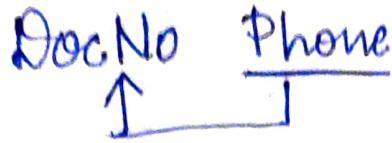


Table-3:

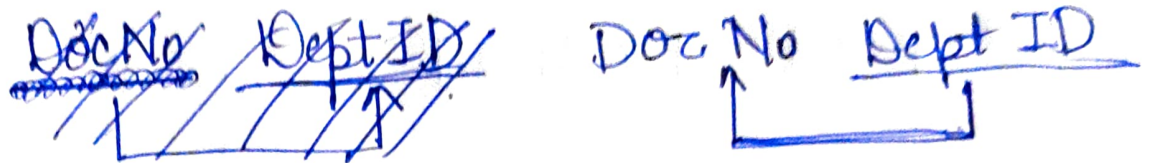
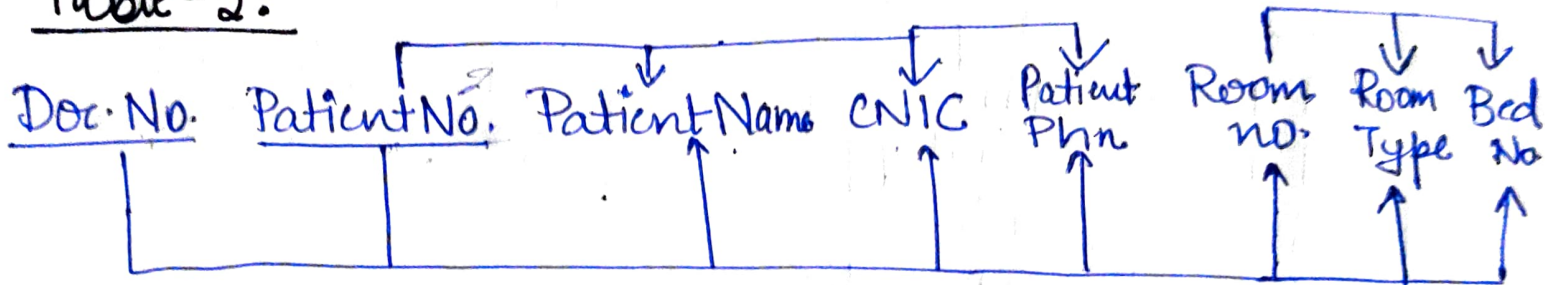


Table-4:



Table-5:



Reducing the table into 2NF

Table 1, 2, 3, 4 are in 2NF

Decomposing table 5:

[Since, it has partial dependence]

Table-6:

DocNo.	PatientNo.	Roomno.	RoomType	BedNo.
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Table-7:

PatientNo.	PatientName	CNIC	PatientPhn.
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(Reducing the table into 3NF)

Table 1, 2, 3 are in 3NF

Decomposing table 4: [Since, it has transitive dependence]

Table 8:

DocNo	Designation
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Table 9:

Designation	Charger
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Decomposing Table 6:

DocNo.	Patient No.	RoomNo.
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Room No.	Room Type	Bed Type
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(Reducing the table into BCNF)

All the tables are in BCNF.

Final Solution

Doc.No.	Name	Address
D1	Nadeem	Abc 123
D2	Nadeem	Kbl3
D4	Enum	Ak123
D5	Hafeez	Nd123

(Table 1)

Doc.No.	PhoneNo.
D1	0333-123
D1	042-123
D2	0334-124
D2	0300-123
D4	0321-123
D5	0321-124

(Table 2)

DocNo.	Dept-id
D1	Neurology
D2	Orthopedic
D4	ENT
D4	Neurology
D5	Skin
D5	Orthopedic

(Table 3)

DocNo.	Designation
D1	Professor
D2	Professor
D4	Asst. Prof
D5	Asst. Prof

(Table 4)

Design	Charges
Professor	5000
Asst. Prof	3000

(Table 5)

Patient No.	Patient Name	CNIC	PatientPhn
P1	Kahlid	12345-1	042-1
P4	Mehmoed	12345-4	042-4
P5	Ahmed	12345-2	042-2
P7	Anum	12345-3	042-3
P9	Khawar	12345-6	042-5
P10	Tanweer	12345-7	042-6
P12	Sohail	12345-9	042-8
P13	Ahmed	12345-0	042-9

(Table 6)

DocNo	Patient No.	RoomNo.
D1	P1	R2
D1	P5	R2
D2	P4	R2
D2	P7	R7
⋮	⋮	⋮

(Table 7)

RoomNo.	Room Type	Bed No.
R2	Normal	B1
R4	Two Bed	B5
R5	Special	B8
⋮	⋮	⋮

(Table 8)