

RDBMS Assignment

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Name - BHARATH P.A

\* Underlined attribute is primary Key

Answer:- Firstly for this table I will take Patient.no and Doc.no as my primary key  
 Patient no and doc.no → Primary Key

1NF - For 1<sup>st</sup> NF we should not have any multi-valued values.

Tables after 1<sup>st</sup> NF

Table T1 -

<u>Patient no</u>	Doc.no	Phone
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Table T2 -

<u>Patient no</u>	Doc.no	Dept Id
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Table T3 -

Bed no	<u>Doc no</u>	Name	Address	Desig	Charges	<u>Pat no</u>	Pat Name	CNIC	Phone	Room no	Room Type
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2<sup>nd</sup> NF - Basically there should no partial dependencies. So the list of partial dependencies are

- 1) Patient no → Phone (4-digit one)
- 2) Patient no → CNIC
- 3) Doc no → Address

Table T4-

<u>Patient No</u>	Phone
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Table T5-

<u>Patient No</u>	CNIC
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Table T6-

<u>Doc. no</u>	address
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Table T7-

<u>Doc no</u>	Name	Designation	Charges	<u>Pat no</u>	Pat name	Room no	Room Type	Bed no.
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3NF - Now there should not any transitive dependency, basically

Now Not a super key  $\rightarrow$  Not a prime Key  
I'll divide  $\nabla \nabla$

Dependencies not following 3NF are

- 1) Docname → Charges
- 2) Designation → Charge
- 3) Room No → Room Type

BCNF - Basically  $X$  should be super key in a dependencies  $X \rightarrow Y$ .

In Table 11, Bed.no can tell the patient no which is not following the condition

So I'll divide T11

Table 12 -

<u>Patient No</u>	<u>Doc no</u>
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Table 13

Bed no

Patient no

Therefore after all the normalization the final table are

T1, T2, T4, T5, T6, T8, T9, T10,  
T12, T13.