

DATE

DB Assignment 03

DAY 

M	T	W	T	F	S	S
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BASIL ALI KHAN

20K-0477

Question # 01

(a)

INSERTION ANOMALIES:

If we want to insert details of new hotel we have to insert also the NIN for member staff even though someone is not recruited.

DELETION ANOMALIES:

If we delete contract No of one staff other staff record will be deleted.

UPDATION ANOMALIES:

If we want to change contract No of staff the updation will take place at every place even though we have updated single value.

(b)

NIN, contractNo  $\rightarrow$  hoursNIN  $\rightarrow$  ename (PARTIAL dependency)ContractNo  $\rightarrow$  hloc, hNo (Partial dependency)hNo  $\rightarrow$  hloc (Transitive dependency)

NIN	contractNo	hours
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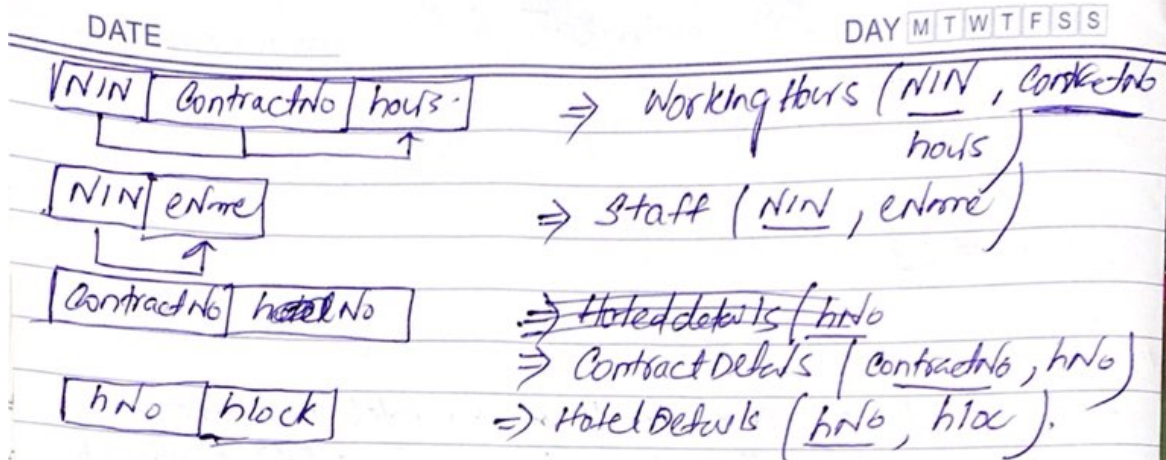
hNo	hloc
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↑

NIN	ename
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 $\Leftarrow$  2NF

ContractNo	hloc	hNo
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## Question #02

(a)

Patient ~~Number~~ # → Full Name

Ward # → Ward Name

Drug # → Name, Description, Dosage, Method of Admin

Patient ~~id~~, Drug ~~id~~, Start date → Units per day, Finish date

(b)

1<sup>st</sup> NF:

Patient #, Drug #, Start date ⇒ CK.

2<sup>nd</sup> NF:

Drug # → Name  
(PD) ↑

Patient # → full name  
(PD)

Patient #, Drug No, Start Date, full name, Ward No, Ward name, bed no, units per day; description, dosage, Method of Admin

Drug No; Name, Description, Dosage, Method of Admin

Patient no, full name





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3 NF :

1 TD  $\Rightarrow$  Ward No  $\rightarrow$  ward Name

Ward No, Ward Name

Patient No, full name

Drug #, Name, description, Dosage, Method of Admin  
Patient #, Drug #, Start Date, Ward No, Bed No,  
Units per day

(c)  
Primary Key  $\Rightarrow$  Ward #  
Drug #  
Patient #

Composite key  $\Rightarrow$  Patient #  
Drug #  
Start date

Foreign keys  $\Rightarrow$  Drug #  
Ward No

Question # 03

SSN  $\rightarrow$  Sname, S#, SC-addr, SC-phone, Bdate, Sex,  
class, Major, Minor, Drug #, SP-addr, SP-phone

S#  $\rightarrow$  Sname, SSN, SC-addr, SC-phone, SP-addr, SP-phone  
Bdate, sex, major, code, minor, drug.

DeptName  $\rightarrow$  Dcode, Doffice, Dphone, DCollege

Dcode  $\rightarrow$  DName, Doffice, Dphone, DCollege

cName  $\rightarrow$  cName, cdesc, credit, lrel, dept

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Sec-Course, Semestrl, year, section → Lmore

Secourse, Semestrl, year, section, ssn → grade

① Student ② Department ③ Course ④ Section ⑤ Grades

Student

ssn, ssn, sc-addr, sc-phone, sp-addr, sp-phone, Bdate  
sex, major, minor, prog, class

Department

Dcode, Dname, Doffice, Dphone, Dcollege

Course

Cnum, CName, COESC, credit, level, coept

Section:

Secourse, Secname, Semestrl, Year, InstructorName

Grade:

Semestrl

Secourse, Section, ~~ssn~~, Year, Cnum, Grade

Foreign keys:

Major in Student

coept in Course

Secourse in Section

name in Student