

Minimal Functional Dependencies in Canonical Form

1. Employee:

Functional Dependencies:

- (a) $EID \rightarrow EName$
- (b) $EID \rightarrow DOB$
- (c) $EID \rightarrow DOJ$
- (d) $EID \rightarrow Salary$
- (e) $EID \rightarrow Category$
- (f) $EID \rightarrow Qualification$
- (g) $EID \rightarrow Start_time$
- (h) $EID \rightarrow End_time$
- (i) $EID \rightarrow Gender$

Normal Form: BCNF

2. Patient:

Functional Dependencies:

- (a) $PID \rightarrow P_Name$
- (b) $PID \rightarrow Gender$
- (c) $PID \rightarrow DOB$
- (d) $PID \rightarrow Admit_from$
- (e) $PID \rightarrow Relation$
- (f) $PID \rightarrow In_date$
- (g) $PID \rightarrow In_time$
- (h) $PID \rightarrow Out_date$
- (i) $PID \rightarrow Out_time$
- (j) $PID \rightarrow ward_no$

Normal Form: BCNF

3. Doctor:

Functional Dependencies:

- (a) $DID \rightarrow Type$

Normal Form: BCNF

4. Doctor-Speciality:

Functional Dependencies:

- No FDs

Key : DID, Speciality_name

Normal Form: BCNF

5. Visitor:**Functional Dependencies:**

- (a) $\text{VisitorID} \rightarrow \text{Visitor_name}$
- (b) $\text{VisitorID} \rightarrow \text{stay_from}$
- (c) $\text{VisitorID} \rightarrow \text{stay_to}$

Normal Form: BCNF**6. meet:****Functional Dependencies:****► No FDs**

Key : PID, VisitorID

Normal Form: BCNF**7. Appointment:****Functional Dependencies:**

- (a) $\text{Appointment_No} \rightarrow \text{App_name}$
- (b) $\text{Appointment_No} \rightarrow \text{Appointment_date}$
- (c) $\text{Appointment_No} \rightarrow \text{Appointment_time}$
- (d) $\text{Appointment_No} \rightarrow \text{fees}$

Normal Form: BCNF**8. Appointment with:****Functional Dependencies:****► No FDs**

Key : DID, Appointment_No

Normal Form: BCNF**9. Treated By:****Functional Dependencies:****► No FDs**

Key : DID, PID

Normal Form: BCNF**10. Available_Wards:****Functional Dependencies:**

- (a) $\text{Ward_no} \rightarrow \text{Ward_type}$
- (b) $\text{Ward_no} \rightarrow \text{Ward_capacity}$
- (c) $\text{Ward_no} \rightarrow \text{Ward_ratePerday}$

Normal Form: BCNF**11. Available_Operation:****Functional Dependencies:**

- (a) $\text{Operation_id} \rightarrow \text{Operation_name}$
- (b) $\text{Operation_id} \rightarrow \text{Operation_rate}$

Normal Form: BCNF**12. Available_Medicine:****Functional Dependencies:**

- (a) $\text{Medicine_id} \rightarrow \text{Medicine_name}$
- (b) $\text{Medicine_id} \rightarrow \text{Medicine_rate}$

Normal Form: BCNF**13. Available_Test:****Functional Dependencies:**

- (a) $\text{Test_id} \rightarrow \text{Test_name}$
- (b) $\text{Test_id} \rightarrow \text{Test_rate}$

Normal Form: BCNF**14. Bill:****Functional Dependencies:**

- (a) $\text{Bill_no} \rightarrow \text{Bill_date}$
- (b) $\text{Bill_no} \rightarrow \text{PID}$
- (c) $\text{Bill_no} \rightarrow \text{Total_amount}$

Normal Form: BCNF**15. Ward_list:****Functional Dependencies:**

- (a) $\text{Ward_list_id} \rightarrow \text{ward_no}$
- (b) $\text{Ward_list_id} \rightarrow \text{PID}$
- (c) $\text{Ward_list_id} \rightarrow \text{Stay_charges}$
- (d) $\text{Ward_list_id} \rightarrow \text{Bill_no}$

Normal Form: BCNF**16. Test_list:****Functional Dependencies:**

- (a) $\text{Test_list_id} \rightarrow \text{Test_date}$

- (b) $\text{Test_list_id} \rightarrow \text{Test_bill_date}$
- (c) $\text{Test_list_id} \rightarrow \text{Test_amount}$
- (d) $\text{Test_list_id} \rightarrow \text{DID}$
- (e) $\text{Test_list_id} \rightarrow \text{PID}$
- (f) $\text{Test_list_id} \rightarrow \text{Bill_no}$

Normal Form: BCNF

17. Have:

Functional Dependencies:

► No FDs

Key : Test_list_id , Test_id

Normal Form: BCNF

18. Medicine list:

Functional Dependencies:

- (a) $\text{Medicine_list_id} \rightarrow \text{Prescription_date}$
- (b) $\text{Medicine_list_id} \rightarrow \text{Medicine_bill_date}$
- (c) $\text{Medicine_list_id} \rightarrow \text{Medicine_quantity}$
- (d) $\text{Medicine_list_id} \rightarrow \text{Medicine_amount}$
- (e) $\text{Medicine_list_id} \rightarrow \text{DID}$
- (f) $\text{Medicine_list_id} \rightarrow \text{PID}$
- (g) $\text{Medicine_list_id} \rightarrow \text{Bill_no}$

Normal Form: BCNF

19. has:

Functional Dependencies:

► No FDs

Key : Medicine_list_id , Medicine_id

Normal Form: BCNF

20. Operation list:

Functional Dependencies:

- (a) $\text{Operation_list_id} \rightarrow \text{Operation_id}$
- (b) $\text{Operation_list_id} \rightarrow \text{Operation_date}$
- (c) $\text{Operation_list_id} \rightarrow \text{Operation_bill_date}$
- (d) $\text{Operation_list_id} \rightarrow \text{Operation_amount}$
- (e) $\text{Operation_list_id} \rightarrow \text{PID}$
- (f) $\text{Operation_list_id} \rightarrow \text{Bill_no}$

Normal Form: BCNF

21. Performs:

Functional Dependencies:

► **No FDs**

Key : Operation_id, DID

Normal Form: BCNF

22. Reports:

Functional Dependencies:

(a) Test_list_id \rightarrow Report_date

(b) Test_list_id \rightarrow Remark

Normal Form: BCNF