

Assignment 9 Questions

- 0) Need to produce functional dependency for unnormalized data for all three problems
- 1) Need to produce functional dependency for each step of normalization for all three problems
- 2) Normalize the Wellmeadows Hospital case study to the third normal form (3NF)
- 3) Normalize the dentist/patient appointment data to the third normal form (3NF)
- 4) Normalize the Instant Cover to the third normal form (3NF)

1.

Functional dependency for wellmeadows hospital normalisation.

patientNo → fullName

wardNo → wardName

wardName → wardNo

drugNo → name, description, dosage, methodOfAdmin

patientNo, drugNo, startDate → unitsPerDay, finishDate

The functional dependencies for bedNo is not clear here in the form. If the bedNo was a unique number for the entire hospital, then we could say that bedNo → wardNo.

Functional dependency for dentist/patient we can draw like that

staffNo → dentistName

staffNo, patNo, patName → appointmentDate, appointmentTime

staffNo → appointmentDate, surgeryNo

patNo → patName

Functional dependency For normalisation for instant cover

NIN → contractNo, hours

NIN → eName

contractNo → hNo, hLoc

2.

3NF for wellmeadow hospital

patientNo, drugNo, startDate, wardNo, bedNo, unitsPerDay, finishDate

drugNo, name, description, dosage, methodOfAdmin

patientNo, fullName

wardNo, wardName

3.

3NF for dentist/patient

staffNo, dentistName

staffNo, patNo , appointmentDate, appointmentTime ,

staffNo appointmentDate, surgeryNo

patNo patName

We can re-arrange all of them and assign with a table with name.

staffNo dentistName

Dentist(staffNo, dentistName)

staffNo ,appointmentDate, appointmentTime, patNo

Appointment(staffNo, apptDate, apptTime, patientNo)

staffNo appointmentDate surgeryNo

Surgery(staffNo, appointmentDate, surgeryNo)

patNo patName

Patient(patNo, patName)

4)

3NF for Instant Cover

NIN, contractNo, hours

NIN, eName

contractNo, hNo

hNo, hLoc

we can re-arrange and also assign with table name like this way

NIN eName

Staff(NIN, eName)

hNo, hLoc

Hotel(hNo, hLoc)

contractNo, hNo

Contract(contractNo, hNo)