Week 7:

Module 11:

Problem 1:

1. You should identify insertion, update, and deletion anomalies in the sample rows of the big patient table shown in Table 1. You should identify one example of each type of anomaly. The combination of *VisitNo* and *ProvNo* is the only unique column(s) for the table.

Table 1: Sample Rows for the Big Patient Table

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **VisitNo** | **VisitDate** | **PatNo** | **PatAge** | **PatCity** | **PatZip** | **ProvNo** | **ProvSpecialty** | **Diagnosis** |
| V10021 | 2/13/2015 | P1 | 36 | Denver | 80217 | D1 | internist | Ear Infection |
| V10021 | 2/13/2015 | P1 | 36 | Denver | 80217 | D2 | NURSE PractiTIoner | INFLUENZA |
| V93030 | 2/20/2015 | P3 | 17 | Englewood | 80113 | D2 | NURSE PRACTITIONER | pregnancy |
| V82110 | 2/18/2015 | P2 | 60 | Boulder | 85932 | D3 | cardiologist | murmur |

Sol:

INSERTION ANOMALY:

Since (VisitNo,ProvNo) acts as a primary key for the table, these are required to insert a row in the table.

Eg: insert into Big Patient VALUES(NULL,NULL,P4,28,PAO,47750,D3,NULL,Murmur);

The above query cannot be executed and patNo P4 cannot be inserted because the VisitNo is not known and is NULL.

UPDATION ANOMALY:

Update table Big Patient SET PatCity=’hyd’ where ProvNo=’D2’;

The above query updates 2 rows since 2 rows contain ProvNo as D2.

DELETION ANAMALY:

Delete from Big Patient where VisitNo=V93030;

The above query deletes the information about P3 also along with VisitNo.