**Problem:**

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.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |

**Solution:**

**Insert:**

Cannot insert a new Patient visit without having **ProvNo**.

**Update:**

Change PatientAge -> change every appointment of the Patient.

**Delete:**

Remove first row -> lose information about P1 and D1.

**Examples**

To insert a Patient (P1), must know Visit and Provision Details.

Update multiple rows to change the description of patient(PatCity,PatZip).

A row deletion can cause inadvertent removal of related entities. Deleting third visit row (v93030, D2) loses details about D2 and P3.