

1

Inserting a new employee, but the Ssn of this new employee does not exist, will cause an insertion exception.

To update Smith's Ssn to 666884444, update the EMP_DEPT table, but the employee Smith still exists in the row where the Ssn is 123456789 in EMP_PROJ.

If you delete the data whose Ssn is 123456789 in the EMP_PROJ table, a deletion exception will occur, because the employee's Ssn is 123456789 in the EMP_DEPT table.

2.

a) candidate key : Title,ArtistName,Type

b) In order to eliminate partial functional dependencies, we get 2NF. From the above dependencies, it can be seen that there is a transfer function dependency: Title→Type, Type→ListPrice. we get 3NF.

TD(Title,Dealer,Type,ArtistName)

TYPEPRICE(Type,ListPrice)

Artist(ArtistName,ArtistAffil)

3.

not 2NF

Reason: The Diagnosis attribute can be uniquely determined by the main attribute, but Charge cannot. Charge can be determined by Trade_code. That is to say, Charge is an attribute that is not determined by the main attribute.

R(D~~o~~ctor,P~~a~~tient,D~~a~~te,Diagnosis,Trade~~_~~code)

S(Trade~~_~~code,Charge)