Nama   : Afina Putri Dayanti
NIM   : 825200049
Jurusan   : Sistem Informasi
Mata Kuliah   : Database Design and Management (Teori)

The relation shown in Figure 14.12 describes hospitals (hospitalName) that require certain items (itemDescription), which are supplied by suppliers (supplierNo) to the hospitals (hospitalName). Furthermore, whenever a hospital (h) requires a certain item (i) and a supplier (s) supplies that item (i) and the supplier (s) already supplies at least one item to that hospital (h), then the supplier (s) will also be supplying the required item (i) to the hospital (h). In this example, assume that a description of an item (itemDescription) uniquely identifies each type of item.

hospitalName	itemDescription	supplierNo
Western General	Antiseptic Wipes	S1
Western General	Paper Towels	S2
Yorkhill	Antiseptic Wipes	S2
Western General	Antiseptic Wipes	S2

a) Describe why the relation shown in Figure 14.12 is not in 5NF.
   cause actually that relation has a join dependency
   JD(hospitalName, itemDescription, supplierNo) among the three projections of HospitalItemSupplier.
   1. R1 (hospitalName, itemDescription)
   2. R2 (hospitalName, supplierNo)
   3. R3 (itemDescription, supplierNo)

b) Describe and illustrate the process of normalizing the relation shown in Figure 14.12 to 5NF.
   remove the join dependency, we create the following 5NF relations:
   HospitalItem (hospitalName, itemDescription)
   HospitalSupplier (hospitalName, supplierNo)
   ItemSupplier (itemDescription, supplierNo)