Base table : bookID | bookName |AuthorID |AuthorName |pages |branch |copies

1. It is in 2NF, as there are partial dependencies and in 1NF
2. bookID 🡪bookName, Pages, Copies, Branch  
   Author\_ID 🡪 Author\_Name, Book\_Name  
   bookName 🡪 Pages, Copies  
     
   3NF  
   Book(BookID, BookName, pages, AuthorID)  
   Author(AuthorID, AuthorName)  
   Bridge(Branch, BookID, copies)  
   Store(Branch)  
     
   ANSWER:  
     
   1) unless a primary key is indicated, you cant assume…  
   therefore, while there are no repeating groups, there is no clear indication what the primary key will be. Therefore 1NF  
     
   2)  
   PK – BookID, Branch | BookID, AuthorID, Branch  
   composite key - want to be as small as possible  
   therefore: PK – BookID, Branch  
     
   -BookID, Branch 🡪AuthorID, AuthorName, BookName, pages, copies  
   -BookID 🡪 BookName, AuthorID, AuthorName, pages  
   -Branch 🡪 Branch  
   (branch does not identify anything on its own)  
   (now transative dependencies)  
   -AUthorID 🡪 AuthorName  
   (below very important… the uniquely identified value)  
   -BookID, Branch 🡪 Copies  
     
   (bookID , bookName ,AuthorID ,AuthorName ,pages ,branch ,copies)  
   show the table in 1NF, identifying primary keys  
     
   Now 2NF, eliminate partial dependencies.  
     
   PK in bold, as red underline cant see  
   Book**(BookID**, BookName, AuthorID, AuthorName, pages)  
   Branch(**Branch**)  
   Stock(**BookID, Branch**, copies)

Now 3NF, eliminate transitive dependencies.  
  
Book**(BookID**, BookName, AuthorID, pages)  
Branch(**Branch**)  
Stock(**BookID, Branch**, copies)  
Author(**AuthorID,** AuthorName)  
  
  
  
repeating groups: when there are null values, where there should be values. Eg not fulling out all author names… only first value fulled in