SQL Coding Test

This is a coding test to assess your MS SQL Server skillset and coding style. Below are some tasks that will ask you to create various DB objects and queries. These are loose requirements, but we want you to add normalized DB objects that will ensure data integrity of the system with system speed/performance in mind. Please make sure that all submitted code is easily readable.

As with most database architecture, you have a choice to make it simple or as complex as you see fit. As this is to be used as an assessment, you do not have to make it overly complex but there should be enough for us to gauge how you approach database architecture. That being said, you have liberties to be as creative as you want to be as long as you meet the requirements.

If you do not have an instance of SQL Server to leverage…SQL FIDDLE will allow you to create a schema (http://sqlfiddle.com/) and run queries off that schema. Let us know if you have any issues and we can work around any technical difficulties.

1) Please write the create scripts for the set of tables below for a library check out system. Add Constraints and Keys to ensure data integrity of the system. You may take liberties and add any columns or additional tables that make sense.

   User:
   A table of Customers

   RefAuthor
   A reference table of Authors of the books in the system

   RefBookTitle:
   A reference table of unique Book Titles in the system. Must be a distinct list of Book Titles (References RefAuthor)

   Book:
   A list of all Physical copies of books in the Library. (References RefBookTitle) *Note: If there are 3 copies of Pride and Prejudice then there will be 3 rows in this table.*

   UserBookLoan:
   A table associated Users and Books indicating that it has been checked out. (Reference CatalogBook and User)

2) Using the schema created in question #1, write a function that when a User and/or Book is passed will return the due date.

3) Using the schema created in question #1 and #2, write a Stored Procedure that will accept a UserID and/or BookID to check out a book and return a due date.

4) Using the schema created in question #1, write a Query that will give you all the books that are available for checkout and how many copies are currently in the library.