Practical Exam Paper for DM – Database Management

Duration: 60 minutes | Total marks: 25

The FPT-Aptech Library need to develope a database to enable effective management of books in library and the load\return readers' books. You are required to write scripts to create database named Library. This database constains the following tables:

Books				
Field Name	**Data Type**	**Size**	**Constraint**	**Description**
BookID	int		PK, identity, starting 100	Book Identify
Title	nvarchar	200		Book title
Author	nvarchar	100		Book anthor
ISBN	varchar	50		Code International Standard Book
Image	varchar	150		Image
Summary	nvarchar	300		Summary's book

Users				
Field Name	**Data Type**	**Size**	**Constraint**	**Description**
UserID	varchar	20	PK	User Identify
FullName	nvarchar	100		Full name of borrower
Email	varchar	30	Unique	Email address
Address	nvarchar	200		Address

Loans				
Field Name	**Data Type**	**Size**	**Constraint**	**Description**
LoanID	int		PK, identity	Loan Identify
UserID	varchar	20	FK, references to column UserID of the Users table	User Identify
BookID	int		FK, references to column BookID of the Books table	Book Identify
DueDate	datetime			Check-out date
Created	datetime		Default current time	Date of loan
Modified	datetime			Date of change loan

1. Create the tables to the above designing.
2. Create an unique constraint named UQ_Books_ISBN on ISBN column on Books table.
3. Insert into above tables at least 3 records per table.
4. Searching for book's titles starting with 'M'.
5. Create an unique index, named IX_Book_Info on Title on Books table.
6. Create a view, named v_DueDate includes Users (UserID, FullName, Email, Address) loan overdue book (the book is limited information on loan payment (DueDate) greater than the current time).
7. Create a view named v_TopLoan includes information of the five most borrowed book.
8. Create a stored procedure named sp_BookAuthor have input parameter is the name of the author and retrived the information of this book.
9. Create a stored procedure named sp_ChangeDueDate have input parameter is the loan identity and number of days on loan extended to make up for borrowed shares.
10. Create a Trigger named tg_LoanModified to change column Modified on table Loans to the present time when something of votes borrow changes.

Marking:	
1	Creating database
4	Creating tables
2	Creating unique constraint on ISBN column of the table Books
3	Insert into data on tables
3	Creating an query to retrieves the books starting with 'M'
2	Creating unique-index on IX_Book_Info field
4	Creating v_DueDate, v_TopLoan Views.
3	Creating and running a store procedure sp_BookAuthor, sp_ChangeDueDate
3	Creating tg_LoanModified trigger.
Total	**25**