CISA 1360 Programming Essentials

205 Lib Project

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1. Project description: 205 Lib is library application which helps librarian managed user and books.
2. Requisition:

|  |  |  |
| --- | --- | --- |
|  | Task name | Status |
| 1 | Connect Python to MS SQL Server | Done |
| 2 | Design User interface (command line) | Done |
| 3 | Design database | Done |

1. Database description:

Database name: Lib\_205

Number of tables: 2

Table 1: Borrowers (

BorrowerID int IDENTITY(-1,1) PRIMARY KEY,

FirstName varchar(255),

LastName varchar(255),

Password varchar(255),

Email varchar(255),

Payment float,

FavoriteGenre varchar(20),

);

Table 2: Librarians (

LibrarianID int IDENTITY(1,1) PRIMARY KEY,

FirstName varchar(255),

LastName varchar(255),

Password varchar(255),

Email varchar(255),

);

Table 2: Books(

BookID int IDENTITY(1,1) PRIMARY KEY,

BookName varchar(255),

Author varchar(255),

Genre varchar(255),

LateFee float,

BorrowDate date,

Lost int,

BorrowerID int FOREIGN KEY REFERENCES Lib\_User(UserID)

);

Details:

TABLE Borrowers:

BorrowerID is generated automatically from -1 increasing by 1( The book which BorrowerID is -1 means was lost)

The user who has all value is 0 is SYSTEM USER.

LoginName: email address

Email: '@' and '.' are required

TABLE Books:

BookID is generated automatically.

New book will be belong to SYSTEM USER.

Genre: Fiction, Fantasy, Classic, Comic

BorrowDate is current date if new inserted book, will be update

date again when user borrow it.

* Default database:

Librarians:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | FirstName | LastName | Password | Email |
| 1 | Ryan | Reynolds | Pa$$w0rd | rrey@my.bcit.ca |
| 2 | Ryan | Roy | Pa$$w0rd | Rrey2@my.bcit.ca |

Borrowers:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | FirstName | LastName | Password | Email | FavoriteGenre |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | Steve | Vo | Pa$$w0rd | dvo12@my.bcit.ca | Fiction |
| 2 | Indranil | Roy | Pa$$w0rd | iroy23@my.bcit.ca | Fiction |
| 3 | Andy | Khuu | Pa$$w0rd | akhuu@34@my.bcit.ca | Classic |
| 4 | Ram | Antig | Pa$$w0rd | [rantig45@my.bcit.ca](mailto:rantig45@my.bcit.ca) | Classic |
| 5 | Justin | Tong | Pa$$w0rd | Jtong56@my.bcit.ca | Comic |
| 6 | Bob | Yuan | Pa$$w0rd | Byuan67@my.bcit.ca | Comic |

Books:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | BookName | Author | Genre | LateFee |
| 1 | American Dirt | Jeanine Cummins | Fiction | 10 |
| 2 | Bluestreak | Mike Klidjian | Fiction | 8 |
| 3 | Innocents | Michael Crummey | Fiction | 12 |
| 4 | The Summer Sand Pact | Jessie Newton | Fiction | 10 |
| 5 | Assassin | Andy Peloquin | Fantasy | 6 |
| 6 | Star Wars | Insight Editions | Fantasy | 9 |
| 7 | The Alchemist | Paulo Coelho | Fantasy | 15 |
| 8 | The Tuscan Secret | Italian handwritten | Fantasy | 8 |
| 9 | The Sandman | Neil Gaiman | Comic | 4 |
| 10 | Dog Man | Dav Pilkey | Comic | 5 |
| 11 | Attack on Titan | Hajime Isayama | Comic | 2 |
| 12 | Jujutsu Kaisen | Gege Akutami | Comic | 2 |

1. Plans:

* Define functions of program:
  + Create user account: Andy
  + Borrower functions:
    - Display all available books
    - Display all borrowed books
    - Display late return books ( need to fix the return date(borrow date))
    - Display total payment
    - Borrow new book
    - Return a book
    - Report lost
  + Librarian functions:
    - Display all available books
    - Create new book
    - Create new librarian
    - Delete a books
    - List all lost books