Group Project 1

ISC 496 Capstone

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Project Description

For this project, we'll make a database based on a library. The database will include entities that keep track of books that are in the library; borrowers who check out books and the events that represent books that have been checked out, when they're due and if they're overdue.

Technologies

The project will consist of a front-end written in HTML, a database created with SQLite3 and PHP to establish connection to, and interact with, the database.

Information:

Tables

Book

Description

A book entity represents a book located in the library. A book can be checked out of the library and checked back in to the library. The book can be checked out for a maximum period of 2 weeks, then it becomes overdue.

Attributes

Title: varchar
book_ID: primary key autoincrement
ISBN: varchar
Author: varchar

Checked_out: boolean
Subject: varchar, multiple

Relationships

Book IS CHECKED OUT BY borrower: the book_id links a checked out book to a borrower_id. Interaction IS DEFINED BY book: the interaction represents an event in the book's history. It will be linked by Book.book_id Interaction .book _id

Borrower

Description

Describes a person checking a book out. Provides information necessary to keep track of book borrower has checked out and has information needed to bill a borrower if a book is brought back late.

Attributes

borrower_id: varchar
Name: varchar
Address: varchar
Username: varchar
Password: varchar

Relationships

borrower CHECKS OUT book
borrower INITIATES interaction

Interaction

Description

An interaction entity represents an event in the book's history. The interaction records a checkout of the book from the library.

Attributes

Interaction_id: varchar primary_key
Book_id: varchar
Checkout_date: datetime
Overdue: derived boolean
borrower_id: varchar

Date_due: derived datetime (today's date + 604,800 seconds)

Relationships

Interaction REPRESENTS A CHECKED OUT book
Interaction REPRESENTS A BORROW BY borrower