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Library Book Management Web Service

I'm in need of a web service that can be used to manage a library's inventory as well as it's guests. The service should allow for the checking in and out of books, as well as the addition and removal of books as the inventory changes. The service should also allow for the addition and removal of guests as well. The service should also have a system for late fees if the guest doesn't bring the book back within a week. There should also be an extension option for any guest that would like to extend their check out another week.

For the backend, the service should use the MySQL database. To store books and guests, each book and guest will be assigned an id. For books, it will be a 4-digit number that is assigned in the backend as the book is added. To create the id, there will be a table of open id's, if the table is empty, the next highest number will be assigned. For guests, a random alphanumeric id is assigned on registration, and in the rare case that is taken, another will be made. Upon the removal of a book, the id assigned to the book will be put into a table of free id's, and when a book is added, the first available id will be assigned to the new book.

Points of contact:

- Late Fee (date) – POST
- Add Book (title, author, publishing year) – POST
- Remove Book (book id) – DELETE
- Get All Books () - GET
- Add Guest (first name, last name) – POST
- Remove Guest (guest id) – DELETE
- Get All Guests() - GET
- Check Out (guest id, book id) – PUT
- Check In (guest id, book id) – PUT