

CMPS 350 · Web Development Fundamentals

Assignment 02 · JavaScript

Instructions

1. The deadline for completing your work is Sunday, March 26, 2023 at 23:59:59. No late submission will be accepted.
2. As you make progress, push your code to your GitHub repository under `assignments/assignment02`
3. Any form of plagiarism will be treated seriously and reported
4. **You are not allowed to use any explicit loop statement such as while, do, or for throughout this assignment.**

Book Donation App

[80 points]

Create a book-app directory under `assignment02`. The app can be used to manage book donations and track donors and books. The catalog is implemented using the following classes:

1. The app should have `donors-repo.js` to maintain the list of donors and allow adding, updating, and deleting donors.

The donor object has `donorID`, `firstName`, `lastName`, and `email` properties.

This module should implement the following functions:

- `getDonor(donorId)`: returns a donor by id.
- `addDonor(donor)`: adds a donor to the list of donors; `donorID` should be auto-assigned a random number.
- `updateDonor(donor)`: updates the donor having the matching `donorID`.
- `deleteDonor(donorID)`: delete the donor with `donorID` from the list of donors, only if they are not associated with any books.

2. The app should have `books-repo.js` to maintain the list of donated books and allow adding, updating, and deleting books.

The book object has `bookID`, `title`, `authors`, and `donorID` properties.

- `donorID` references the book's donor.

This module should implement the following functions:

- `addBook(book)`: adds a book to the list of books. `bookID` should be auto-assigned a random number.
- `updateBook(book)`: updates the book having the matching `bookID`.
- `deleteBook(bookID)`: delete the book with `bookID` from the list of books.
- `getBooksByDonor(donorID)`: returns the list of books donated by a particular donor.

3. Create an `app.js` file and test the app functionality using few books and donors.

Unit Testing

[20 points]

Create a file `books-repo.spec.js` under `book-app/test` and use [Mocha](#)/[Chai](#) to test the books repository functions.