

CMPS 350 · Web Development Fundamentals

Assignment 02 · JavaScript

Instructions

1. The deadline for completing your work is Sunday, March 26, 2023 at 1:00 PM. 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.