Intro to JavaScript Week 5 Coding Assignment

Points possible: 75

URL to Your GitHub Repository:

Instructions: In VS Code, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your JavaScript project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

Coding Steps:

1. Create a menu app as seen in this week's video. What you create is up to you as long as it meets the following requirements.
    a. Use at least one array.
    b. Use at least two classes.
    c. Your menu should have the options to create, view, and delete elements.

Screenshots of Code:

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index.js U | index.html U

Coding Assign Wk5 > index.js > Author > addBook

```
class Book { // created a class named Book
    constructor(name, year) { // class will take the book name and year written
        this.name = name;
        this.year = year;
    }
    describe() {
        return `${this.book} was written ${this.year}.`; // class will return the entered book name and year written
    }
}

class Author { // created a class named Author
    constructor(name) { //class will take the name of book author
        this.name = name;
        this.books = [];
    }

    addBook(book) { // method to take a book
        if (book instanceof Book) { // check to see if a book is an instance of our book class
            this.books.push(book); // push a new book to the book array
        } else {
            throw new Error(`You can only add an instance of Book. Argurment is not a book: ${book}`);
        }
    }

    describe() {
        return `${this.name} has ${this.books.length} books.` // print out the name of author and how many of their books we have
    }
}

class Menu {
    constructor() {
        this.authors = []; // array to collect multiple authors
        this.selectedAuthor = null; // show a selected author from array
    }

    start () {
        let selection = this.showMainMenuOptions(); // return the selection the user gives us

        while (selection != 0) { // get users input
```

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Coding Assign Wk5 > index.js > Author > addBook

```
            switch (selection) { // display different selections for the user
                case '1':
                    this.createAuthor();
                    break;
                case '2':
                    this.viewAuthor();
                    break;
                case '3':
                    this.deleteAuthor();
                    break;
                case '4':
                    this.displayAuthors();
                    break;
                default:
                    selection = 0;
            }
            selection = this.showMainMenuOptions();
        }

        alert('Adios!');
    }

    showMainMenuOptions() {
        return prompt(`
        0) exit
        1) create new author
        2) view author
        3) delete author
        4) display all authors
        `);
    }

    showAuthorMenuOptions (authorInfo) {
        return prompt(`
        0) back
        1) create book
        2) delete book
        ---------------
        ${authorInfo}
```

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index.js U index.html U

Coding Assign Wk5 > index.js > Author > addBook

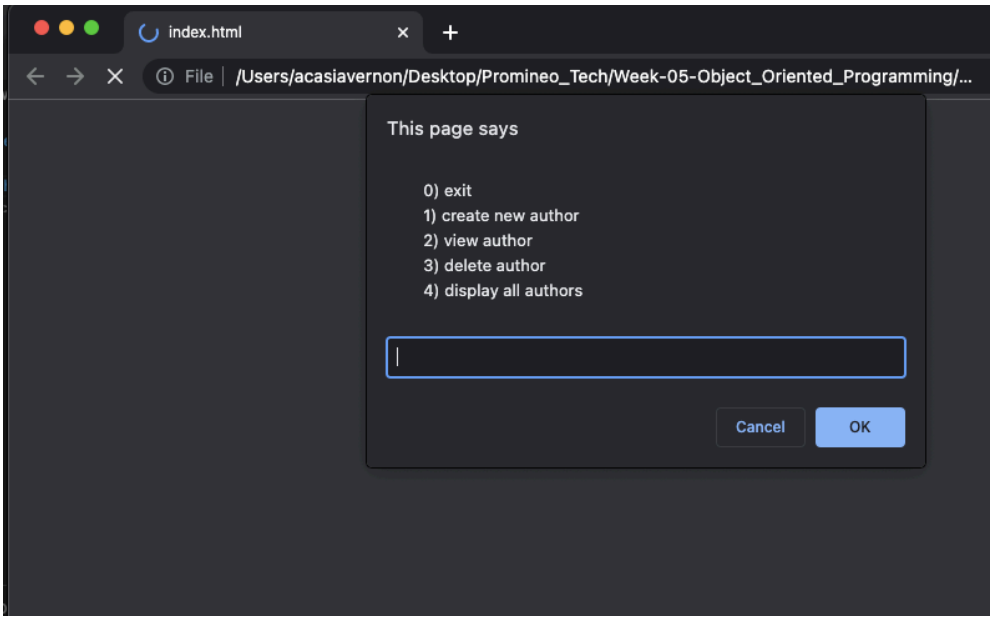
```
79          `);
80      }
81
82      displayAuthors() {
83          let authorString = ''; // create a blank string
84          for (let i= 0; i < this.authors.length; i++) { // iterate through authors
85              authorString += i + ') ' + this.authors[i].name + '\n'; // get the name of each author numbered on a new line
86          }
87          alert (authorString); // see all the authors
88      }
89
90      createAuthor () { // method to create author
91          let name = prompt ('Enter name for new author:'); // prompt the user to enter the name of an author
92          this.authors.push(new Author(name)); // push new author to authors array
93      }
94
95      viewAuthor() { // method to view author
96          let index = prompt('Enter the index of the author you wish to view:'); // prompt user to enter index to view selected author
97          if (index > -1 && index < this.authors.length) {
98              this.selectedAuthor = this.authors[index]; // set selected author class propterty to the author input by user
99              let description = 'Author:' + this.selectedAuthor.name + '\n';
100
101             for (let i = 0; i < this.selectedAuthor.books.length; i++) { // for loop to iterate through the selected authors books array
102                 description += i + ') ' + this.selectedAuthor.books[i].name + ' - ' + this.selectedAuthor.books[i].year + '\n';
103             }
104
105             let selection = this.showAuthorMenuOptions(description) // pass in description to display author and show options for author
106             switch (selection) { // created options under author - create or delete book
107                 case '1':
108                     this.createBook();
109                     break;
110                 case '2':
111                     this.deleteBook();
112             }
113         }
114     }
115
116     deleteAuthor() { //method to delete author
117         let index = prompt('Enter the index of the author you want to delete:'); //prompt user to enter the index of author they want to delete
```

index.js U index.html U

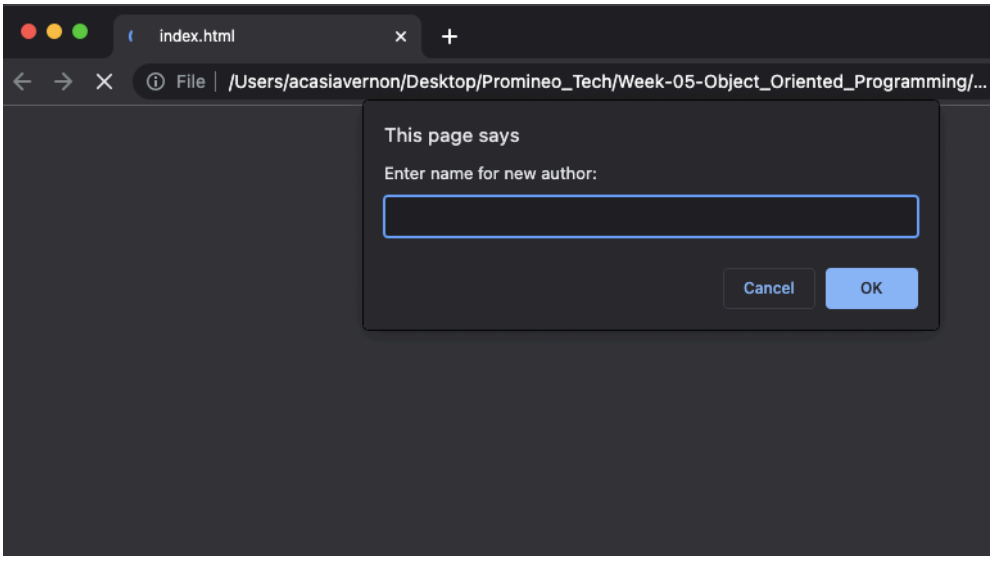
Coding Assign Wk5 > index.js > Author > addBook

```
112             }
113         }
114     }
115
116     deleteAuthor() { //method to delete author
117         let index = prompt('Enter the index of the author you want to delete:'); //prompt user to enter the index of author they want to delete
118         if (index > -1 && index < this.authors.length) {
119             this.authors.splice(index, 1); //delete the author under entered index
120         }
121     }
122
123     createBook() { //method to create a book
124         let name = prompt('Enter name for new book:'); // prompt user to enter the name and year of book
125         let year = prompt('Enter year for new book:');
126         this.selectedAuthor.books.push(new Book(name, year)); // push the new book, with its name and year, to the selected author's books array
127     }
128
129     deleteBook() { // method to delete a book
130         let index = prompt('Enter the index of the book you want to delete:'); //prompt user to enter index of book they want to delete
131         if (index > -1 && index < this.selectedAuthor.books.length) {
132             this.selectedAuthor.books.splice(index, 1); // delete book under user entered index from the selected author's books array
133         }
134     }
135 }
136
137 let menu = new Menu ();
138 menu.start();
```

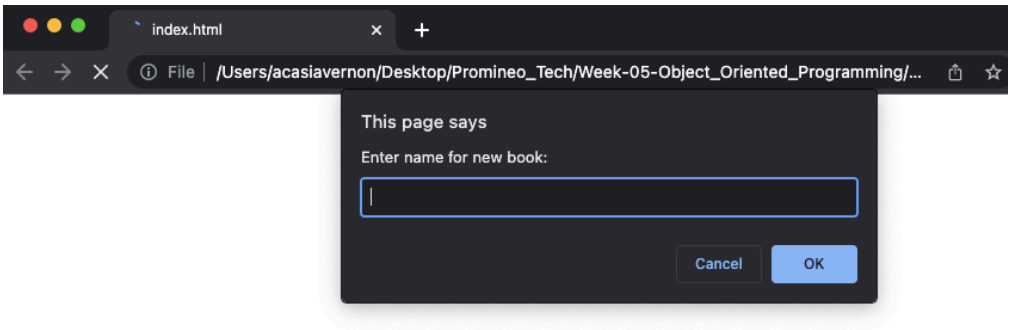
Screenshots of Running Application:



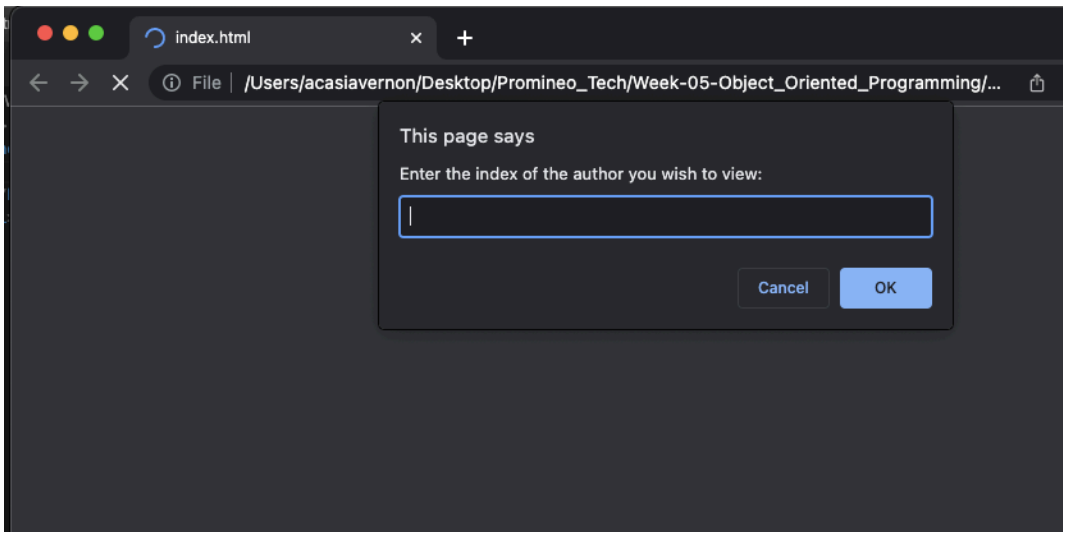
Created an author:

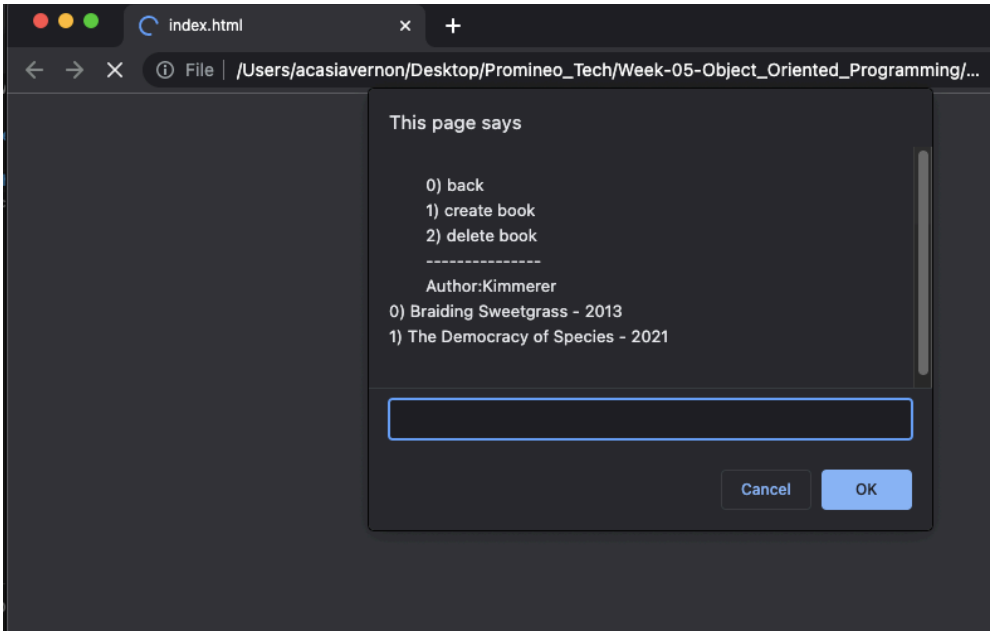


Created books

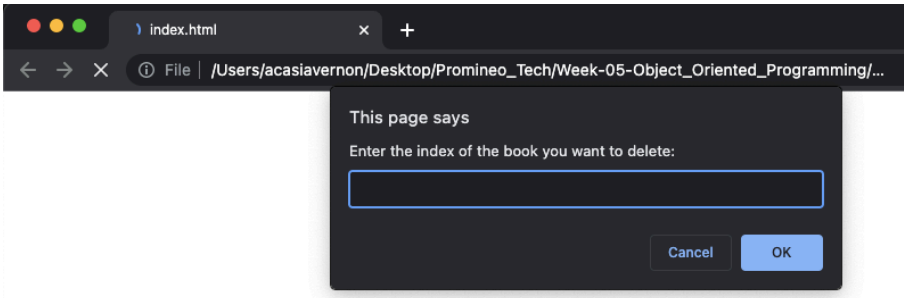


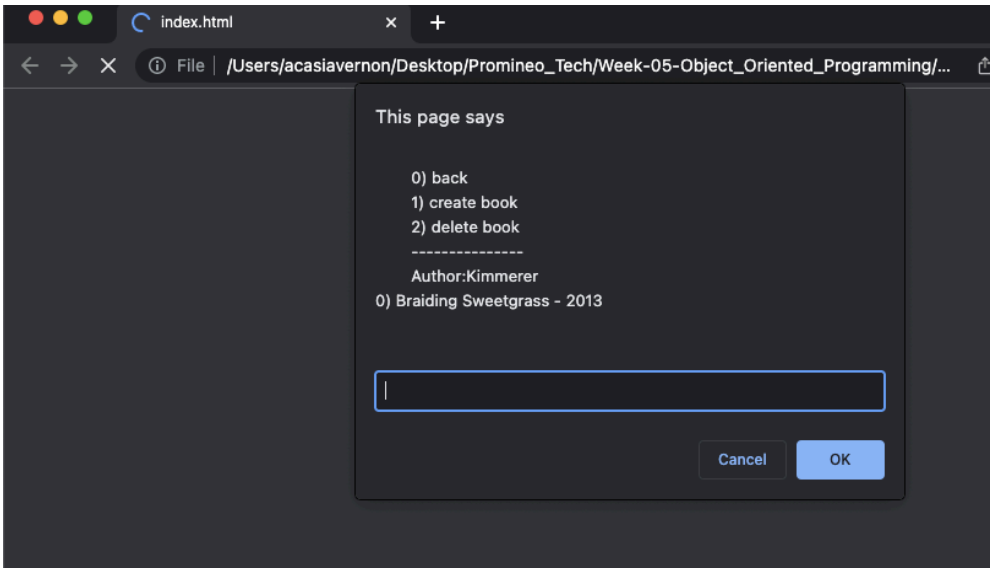
View Author with books displayed



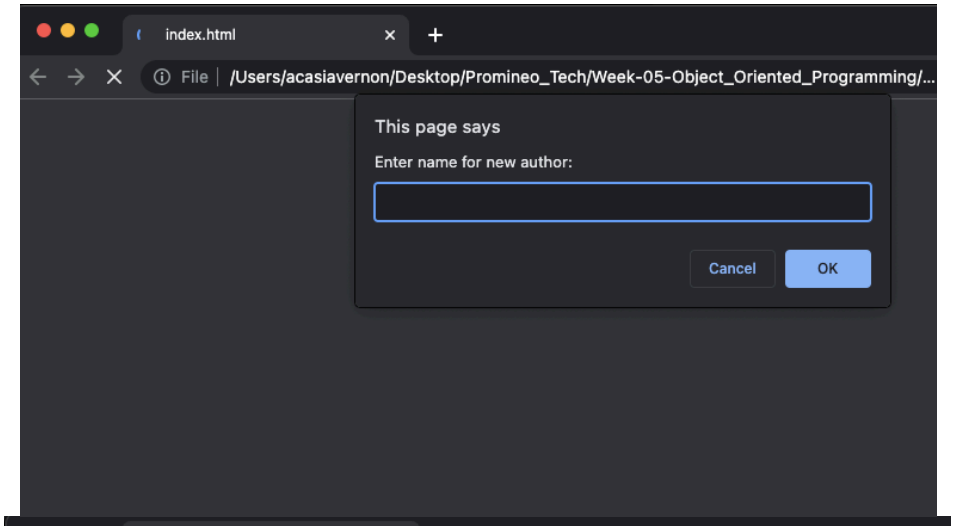


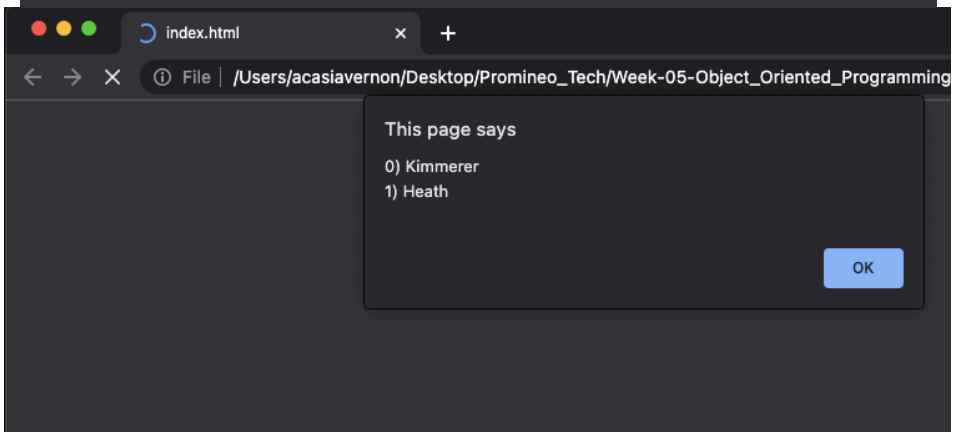
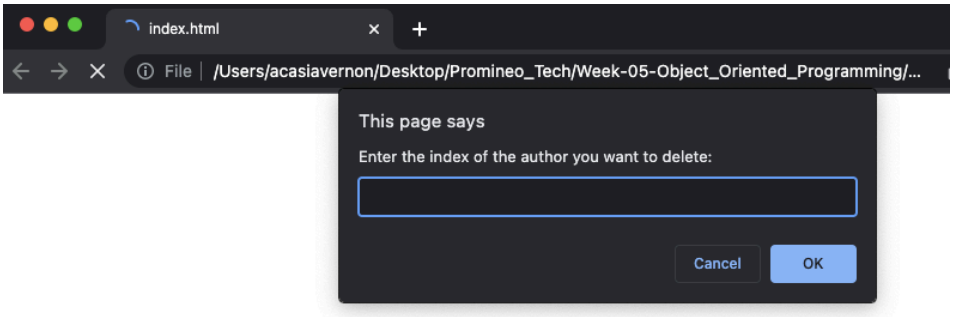
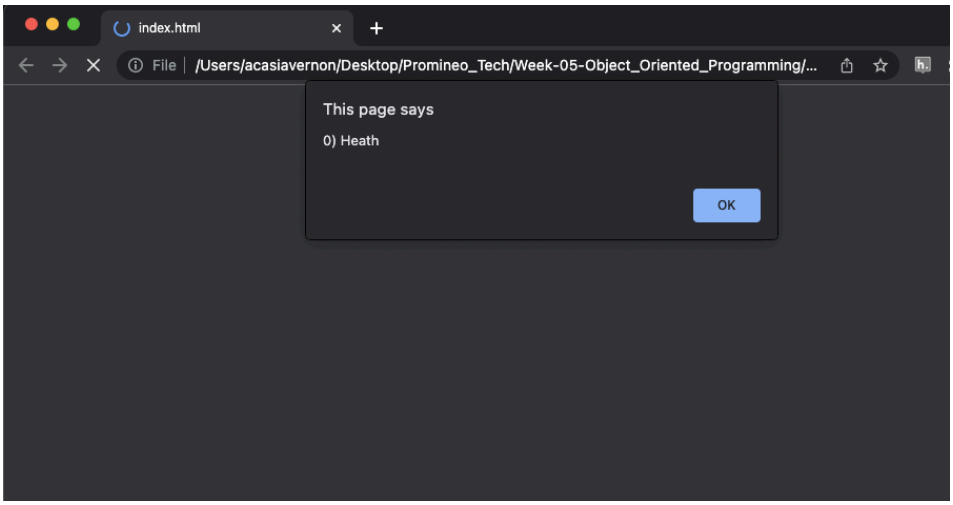
Deleted a book:





Added an author:





Deleted an author: