JS Advanced: Exam 15 July 2018

Problem 3. Book Collection

Write a JavaScript class BookCollection which holds a list containing shelf information (shelfGenre, room, shelfCapacity).

```
class BookCollection {
    // TODO: implement this class
}
```

Each BookCollection is located in specific room, on a shelf with defined capacity and shelf name. Implement the following features:

- Constructor It should contain the following properties room(String), shelfGenre(String), shelf(an array), shelfCapacity(Number). If the room is: "livingRoom" or "bedRoom" or "closet", create the shelf's genre, room and shelf capacity. If it is not, throw "Cannot have book shelf in {room's name}". Shelf capacity will always be a valid positive number.
- Method addBook (bookName, bookAuthor, genre) adds book to the shelf only if there's enough space in the shelf. If the shelf is full, remove the first book to make space for the new one. The genre is optional. In the end, sort our shelf alphabetically by book author's name.
- Method throwAwayBook(bookName) removes a book from the shelf by the given name.
- Method showBooks(genre) returns all books by the given genre. You should return a string with the following information:

```
"Results for search "{history}":"
"\uD83D\uDCD6 {bookAuthor} - "{bookName}""
```

- Accessor property **shelfCondition** returns the **count** of **free slots** left in the shelf.
- Method **toString()** returns the **text representation** of the shelf in the following format:
 - Empty shelf:

```
"It's an empty shelf"
```

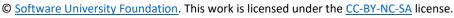
Non-empty shelf:

```
""{shelfGenre}" shelf in {room} contains:"
"\uD83D\uDCD6 "{bookName}" - {bookAuthor}"
```

Examples

This is an example of how the **BookCollection** class is **intended to be used**:



















Sample code usage let livingRoom = new BookCollection("Programming", "livingRoom", 5) .addBook("Introduction to Programming with C#", "Svetlin Nakov") .addBook("Introduction to Programming with Java", "Svetlin Nakov") .addBook("Programming for .NET Framework", "Svetlin Nakov"); console.log(livingRoom.toString());

```
Corresponding output
"Programming" shelf in livingRoom contains:
□ "Introduction to Programming with C#" - Svetlin Nakov
□ "Introduction to Programming with Java" - Svetlin Nakov
☐ "Programming for .NET Framework" - Svetlin Nakov
```

```
Sample code usage
let garden = new BookCollection("Programming", "garden");
                                    Corresponding output
"Cannot have book shelf in garden"
```

```
Sample code usage
let bedRoom = new BookCollection('Mixed', 'bedRoom', 5);
bedRoom.addBook("John Adams", "David McCullough", "history");
bedRoom.addBook("The Guns of August", "Cuentos para pensar", "history");
bedRoom.addBook("Atlas of Remote Islands", "Judith Schalansky");
bedRoom.addBook("Paddle-to-the-Sea", "Holling Clancy Holling");
console.log("Shelf's capacity: " + bedRoom.shelfCondition);
console.log(bedRoom.showBooks("history"));
                                  Corresponding output
Shelf's capacity: 1
Results for search "history":
Cuentos para pensar - "The Guns of August"
David McCullough - "John Adams"
```

Submission

Submit your class BookCollection as "JavaScript code".

















Notes

Use the following Unicode for visualizing the book icon: "\uD83D\uDCD6".

No invalid input will be given.















