Author

id: int
name: String
series: List<Series>
books: List<Book>

Author()
Author(String)

getId(): int
setId(int)
getName(): String
setName(String)
getSeries(): List<Series>
setSeries(List<Series>)
getBooks(): List<Book>
setBooks(List<Book>)
addSeries(Series)
addBook(Book)
toString(): String

Book

id: int
name: String
release_year: String
page_count: String
description: String
rating: int
author: Author
series: Series
characters: List<Character>

Book()
Book(int, String, String, String, String, int)

getId(): int
setId(int)
getName(): String
setName(String)
getRelease_year(): String
setRelease_year(String)
getPage_count(): String
setPage_count(String)
getDescription(): String
setDescription(String)
getAuthor(): Author
setAuthor(Author)
getSeries(): Series
setSeries(Series)
getCharacters(): List<Character>
setCharacters(List<Character>)
getRating(): int
setRating(int)
addCharacter(Character)
toString(): String

Character

id: int
name: String
role: String
books: List<Book>

Character()
Character(String, String)

getId(): int
setId(int)
getName(): String
setName(String)
getRole(): String
setRole(String)
getBooks(): List<Book>
setBooks(List<Book>)
toString(): String

Series

id: int
name: String
author: Author
books: List<Book>

Series()

getId(): int
setId(int)
getName(): String
setName(String)
getAuthor(): Author
setAuthor(Author)
getBooks(): List<Book>
setBooks(List<Book>)
addBook(Book)

toString(): String

AuthorService

findAll():List<Author>
findById(int):Author
save(Author)
deleteById(int)

AuthorServiceImpl

AuthorServiceImpl(AuthorRepository)

findAll():List<Author>
findById(int):Author
save(Author)
deleteById(int)

AuthorRepository

BookService

findAll():List<Book>
findById(int):Book
save(Author)
deleteById(int)
getByKeyword(String):List<Book>

BookServiceImpl

BookServiceImpl(BookRepository)

findAll():List<Book>
findById(int):Book
save(Book)
deleteById(int)
getByKeyword(String):List<Book>

BookRepository

getByKeyword(String):List<Book>

BookController

bookService: BookService
seriesService: SeriesService
authorService: AuthorService
characterService: CharacterService

BookController(BookService, SeriesService,
AuthorService, CharacterService)

listBooks(Model):String
showFormForAdd(Model):String
search(Model, String):String
saveBook(Book):String
delete(int):String

SortingController

bookService: BookService

SortingController(BookService)

insertionSort(Model): String
quickSort(Model): String
mergeSort(Model): String
selectionSort(Model): String
shuttleSort(Model): String
shellSort(Model): String

Sorting

array: Book[]

swap(Book[], int, int)
invertUsingFor(Book[])
insertionSort(Book[])
quickSort(Book[], int, int)
mergeSort(Book[], int)
merge(Book[], Book[], Book[], int, int)
selectionSort(Book[])
shuttleSort(Book[])
shellSort(Book[])

CharacterService

findAll():List<Character>
findById(int):Character
save(Author)
deleteById(int)

CharacterServiceImpl

CharacterServiceImpl(CharacterRepository)

findAll():List<Character>
findById(int):Character
save(Character)
deleteById(int)

CharacterRepository

SeriesService

findAll():List<Series>
findById(int):Series
save(Author)
deleteById(int)

SeriesServiceImpl

SeriesServiceImpl(SeriesRepository)

SeriesServiceImpl(SeriesRepository)

findAll():List<Series>
findById(int):Series
save(Series)
deleteById(int)

ServiceRepository