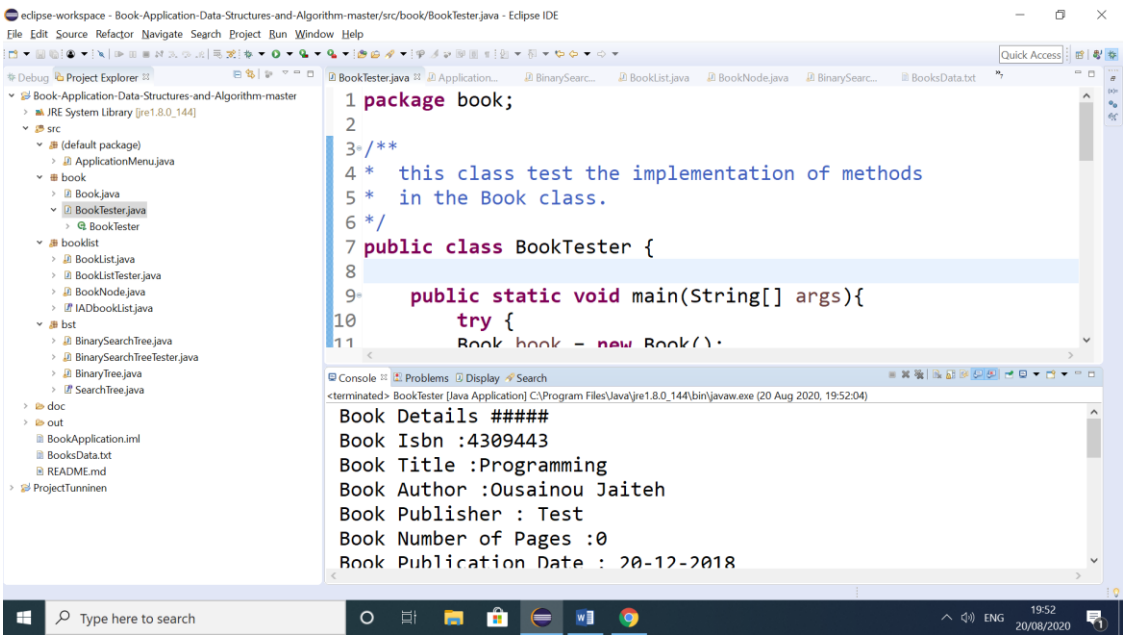
Data Structures and Algorithm - Book-Application Test Regime

Note: To test the Book Application please run with Eclipse, IntelliJ or any other IDE compatible with java.

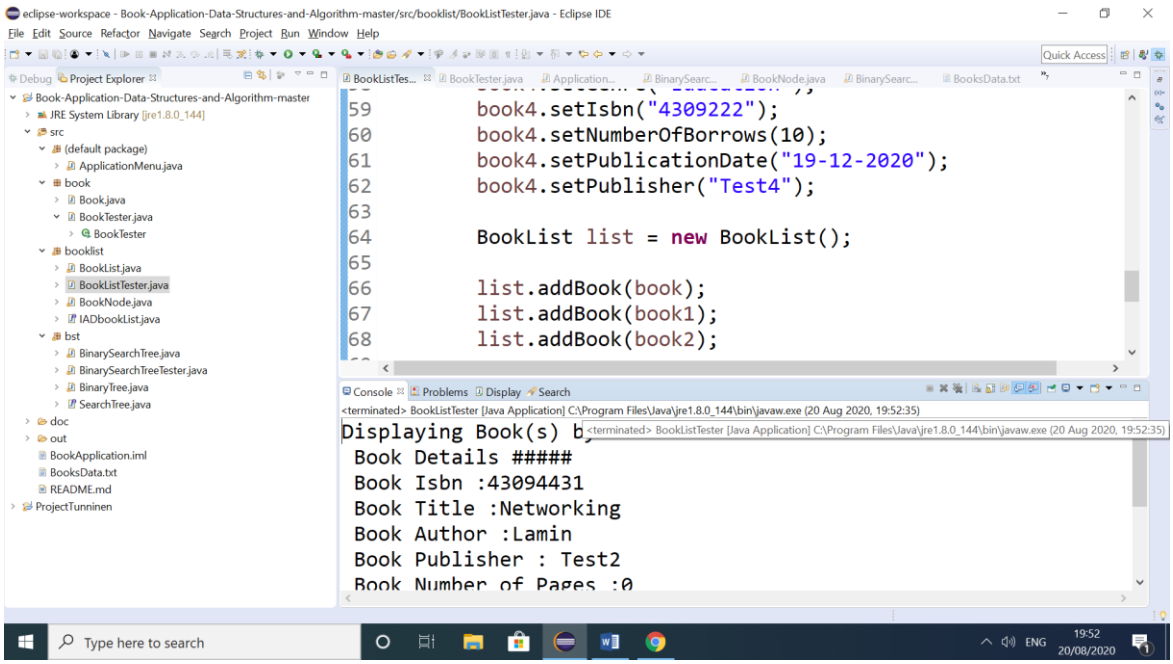
Below I list each class and how to go about testing it:

1. **Book Tester class**: This class test the implementation of methods in the Book Class. To Test it simply open in IDE and run it. Two book objects have been created in this class with respective data by making use of the setters methods for the available properties such as ISBN, Title, Author, Publisher, Number of Pages, Publication Date, Format, Genre and Number of borrows. A toString method is created in the **Book** class that calls and prints all the data available in the getter methods of these books. See figure below:

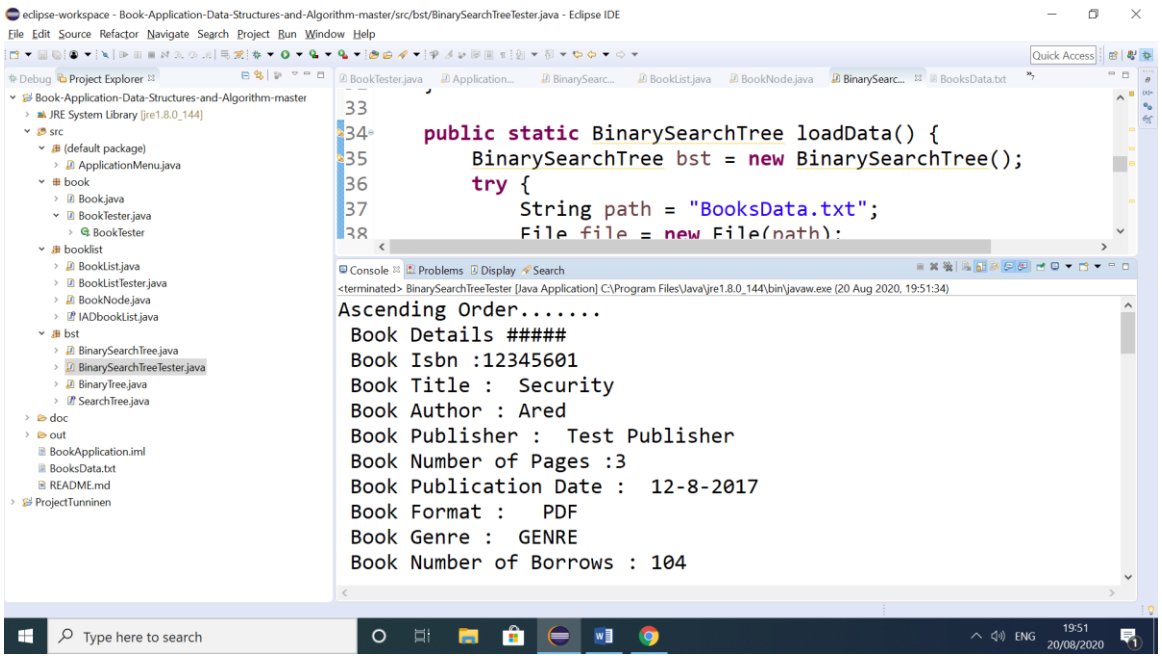


2. **BookList Tester class**: This class test the implementation of the methods in the **BookList** and **BookNode** classes. We created 5 Books in this class with respective data using the available setter methods in the Book class. We also instantiate the **BookList** class to add all 5 Books into the BookList LinkedList. The constructor of the BookList class allows us to create a Book as a BookNote. So every Book is a

BookNode that has reference to the next BookNode. This is seen in the **BookNode** class. See Figure below:

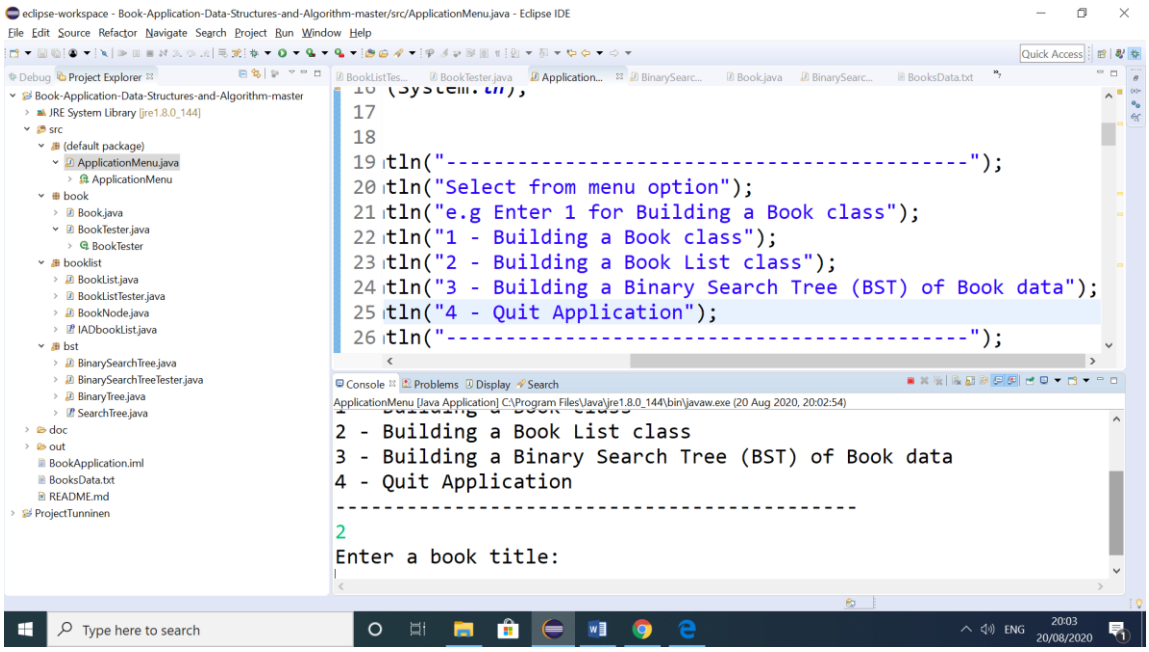


3. **Binary Search Tree Tester class**: This class test the implementation of methods in the Binary Search Tree class. It loads data from BooksData.txt which contains data of Books and their properties. This data is loaded using the LoadData method and then I read through it using File reader to load the data in memory and created methods to sort data in ascending or descending order by author name. See figure below:

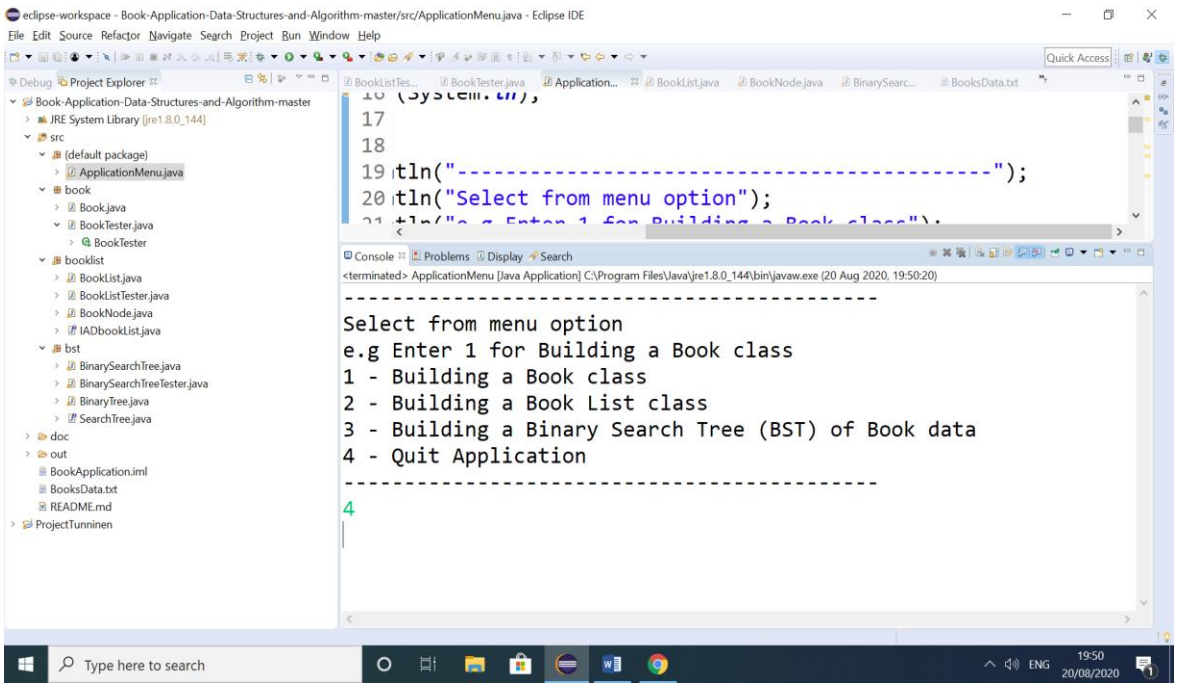


4. **Application Menu class**: This class test the implementation of methods in the Book, BookList and BinarySearchTree classes. It allows the user to select a menu option to test any one of the Tester class implementation of these classes. So the user gets to select from the console an option from 1 to 4 and has the choice to repeat the process again. Option 4 allows the user to quit the application. See figure below:

Option 2



Option 4



5. Lastly, the **Javadoc** is located in the “docs” folder. To view it, simply click on the index page.