

CS 322: Database Systems

Alexandria University

Faculty of Engineering

Computer and System Engineering

Department

Book Store Project

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TA’s Name:

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Links of SQL Scripts for the Project

* **Creation of schema and tables:**

**https://drive.google.com/file/d/1zLamEgX6NuQAIKfeeksTPk4iwL038-xx/view?usp=sharing**

* **Creation Triggers:**

[**https://drive.google.com/file/d/1KyWXpBBcbY1WiUg53u-yj-ZL7DX2FLGQ/view?usp=sharing**](https://drive.google.com/file/d/1KyWXpBBcbY1WiUg53u-yj-ZL7DX2FLGQ/view?usp=sharing)

* **ERD Diagram:**

**https://drive.google.com/file/d/1aD5W\_v6yhnA2Yrn2JSrubOvKlR\_\_Q3\_O/view?usp=sharing**

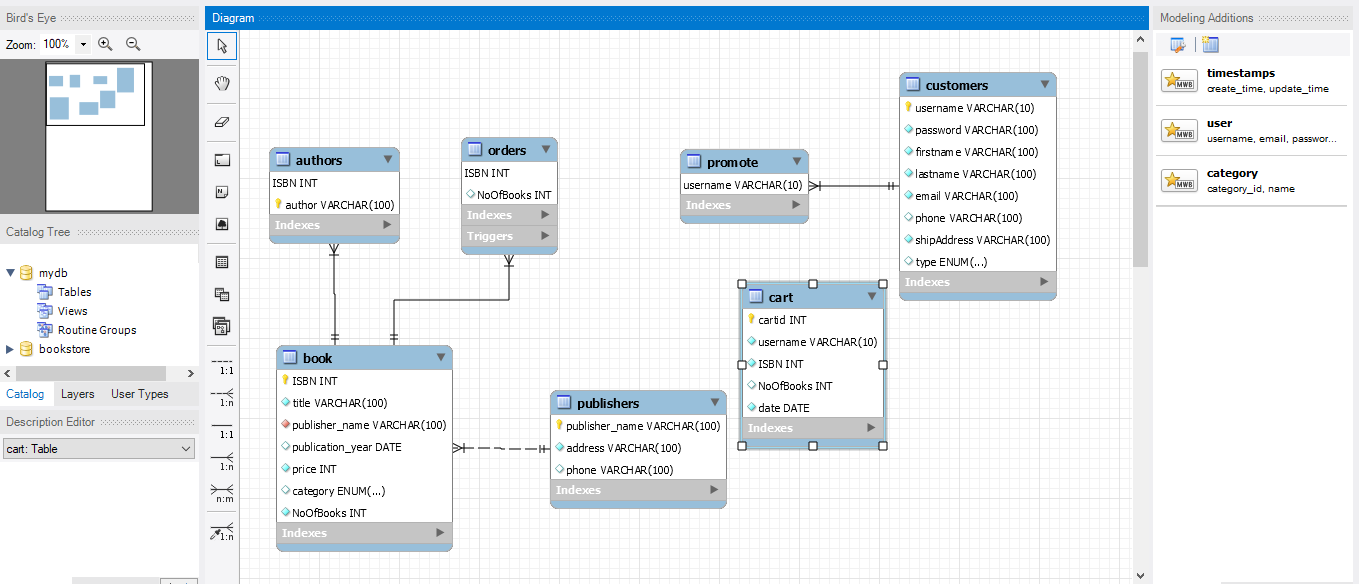
Links of Jasper files

**I open them with atom editor**

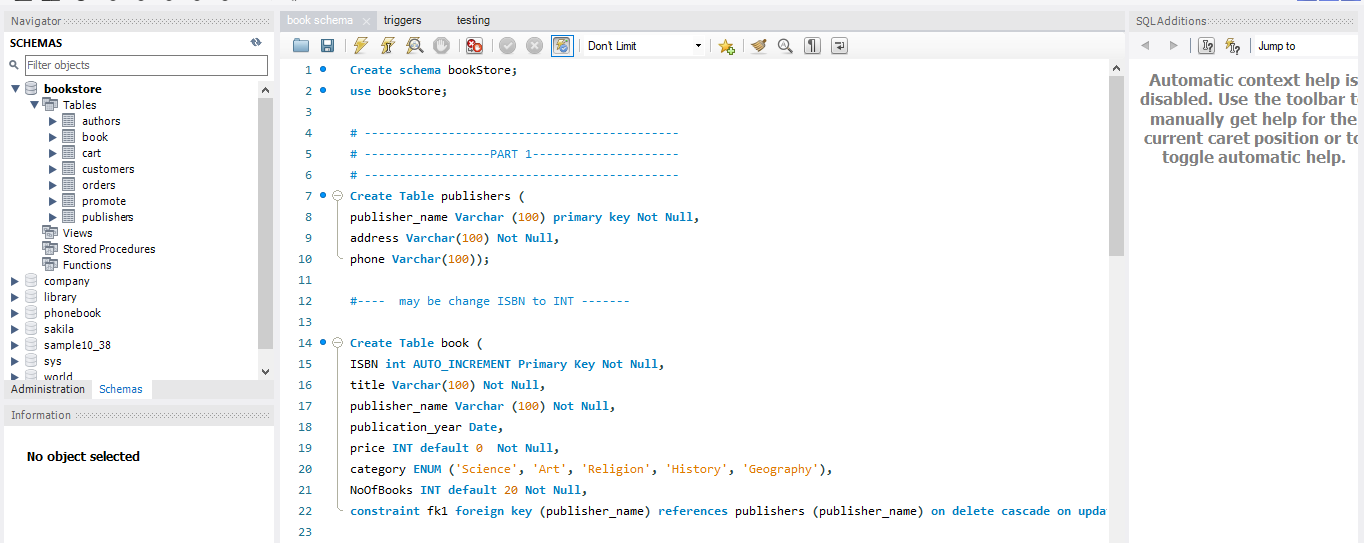
* **Link of the folder contains the three files:**

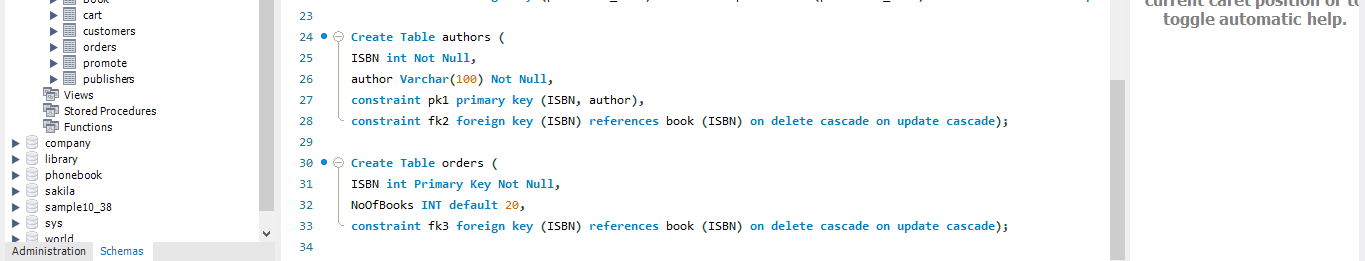
**https://drive.google.com/drive/folders/1KbhlU\_T6WdUKzCTMPHZEf4sxIVKvDjrQ?usp=sharing**

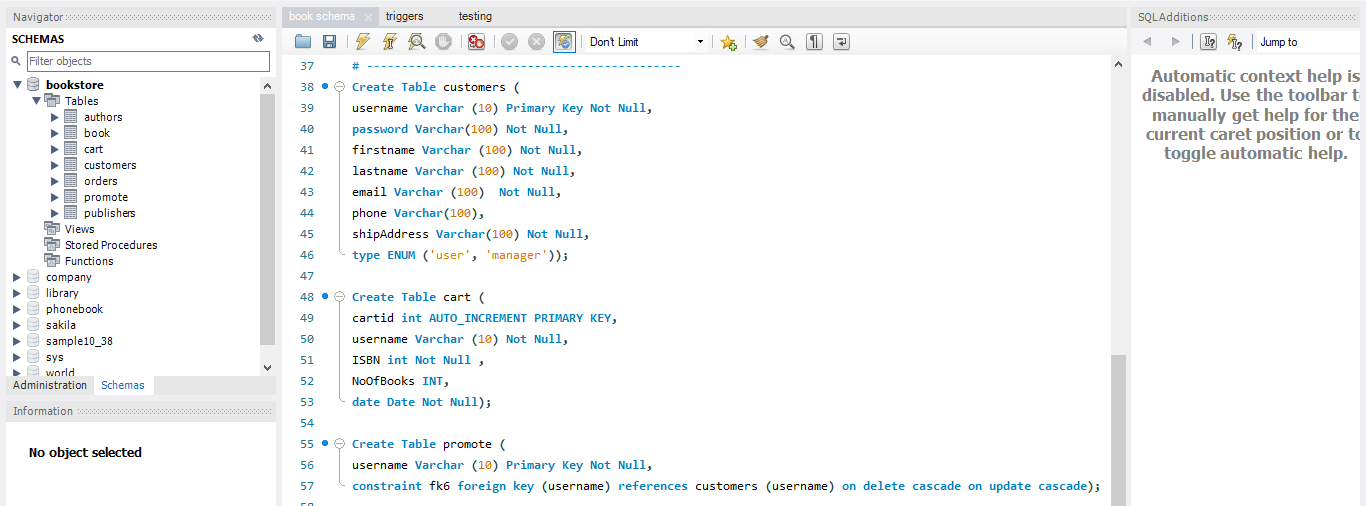
* Database ERD diagrams:



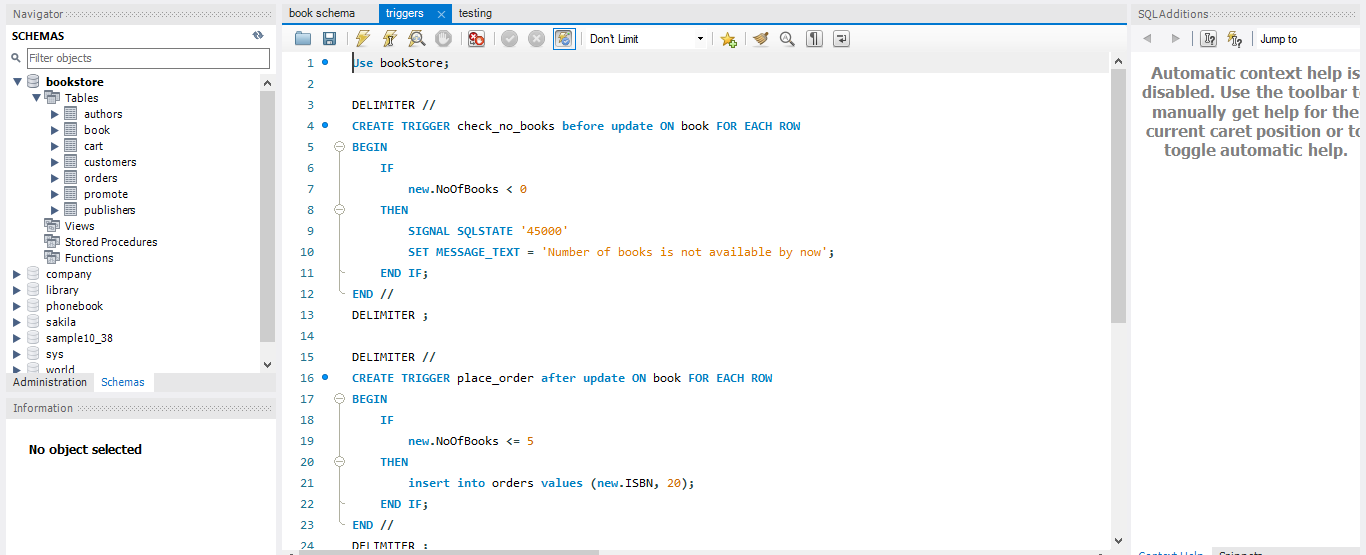
* Description, Analysis:
* **Schema Assumptions:**
* There are 7 tables (publishers, book, authors, orders, customers, cart and promote).
* Orders table has the orders have been done buy the managers, has two attributes (ISBN and number of books).
* Cart has the sells of the book store, has four attributes (cart id (auto generated and incremented), username, ISBN, and number of books).
* Promote has the user who want to be a manager and has attribute which is the users’ names.
* Book table will have ISBN auto generated and increment one by one with each insertion in it.
* The Authors have another table extracted from the book table to accomplish the BCNF to be atomic as authors are multivalued.
* **Triggers used and its assumptions:**
* Check number of books to not to be negative.
* Order books of about 20 new books if number of books reach 5.
* Confirm the order by the manager.
* **Schema screenshots:**

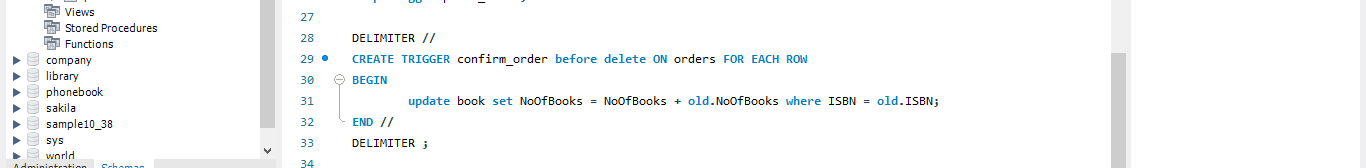






* **Triggers screenshots:**





* **Java description and assumptions:**
* **Components:**
* *Book*

Contains the book attributes identified in the SQL.

* *Cart*

Contains the cart attributes identified in the SQL.

* *Person*

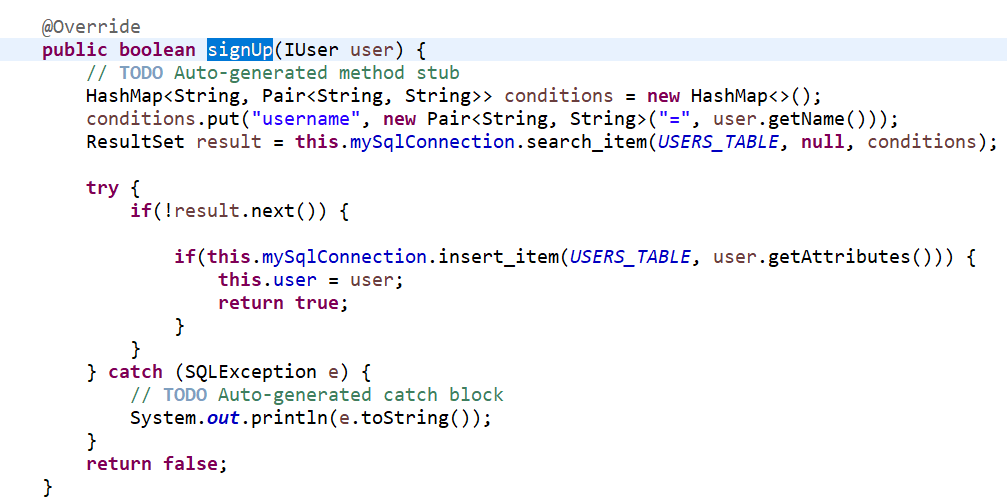
Abstract class contain the name, address and phone of person.

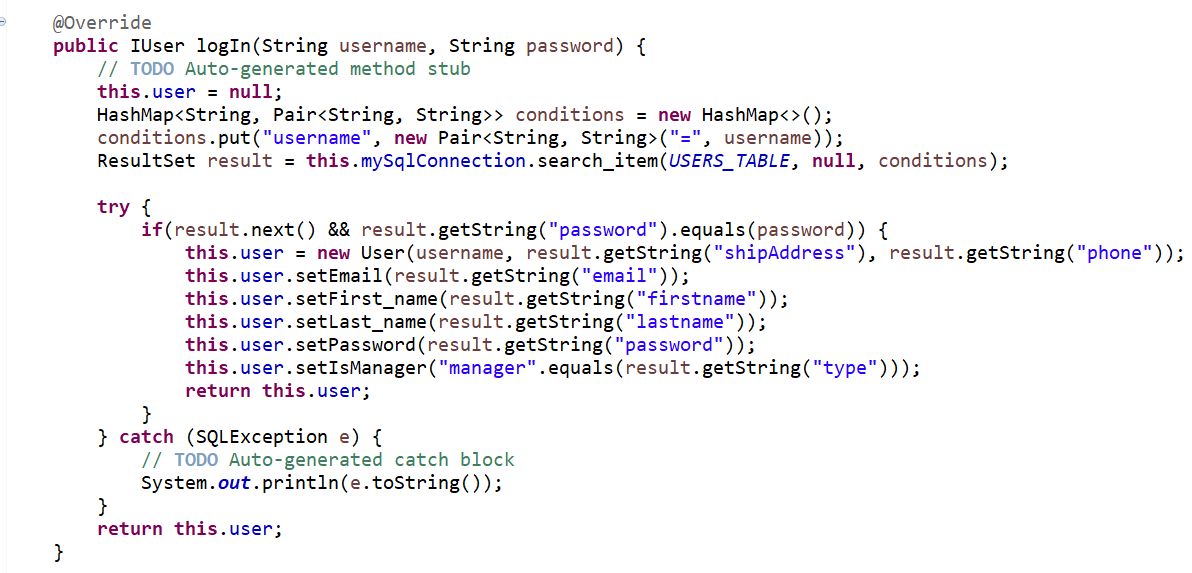
* *User*

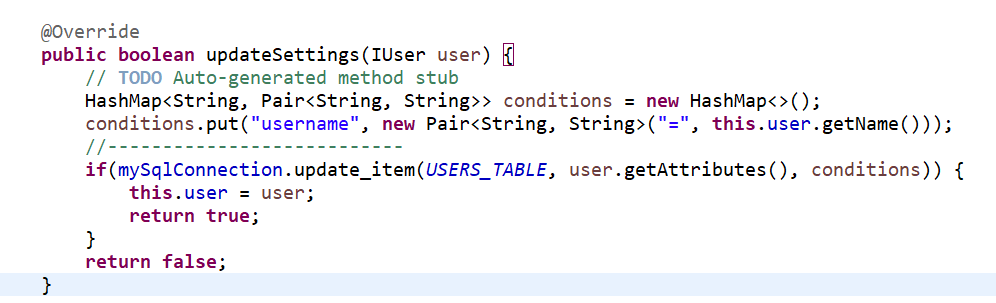
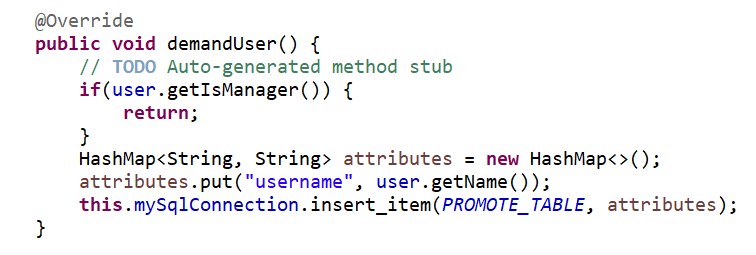
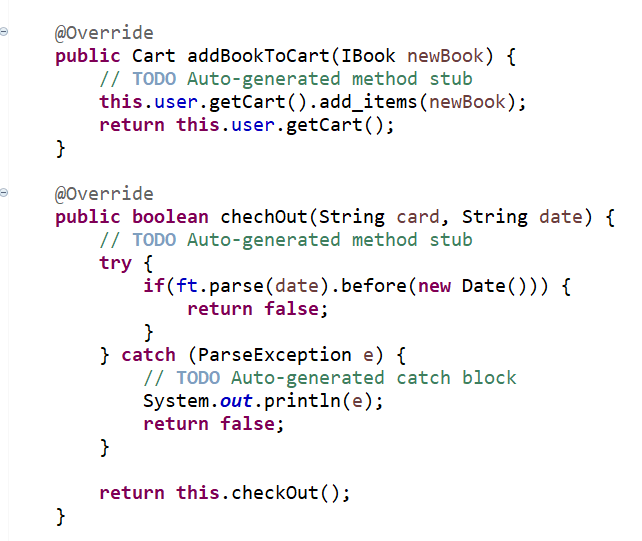
Class extends from the person in addition to the rest of attributes of the customer in the SQL file.

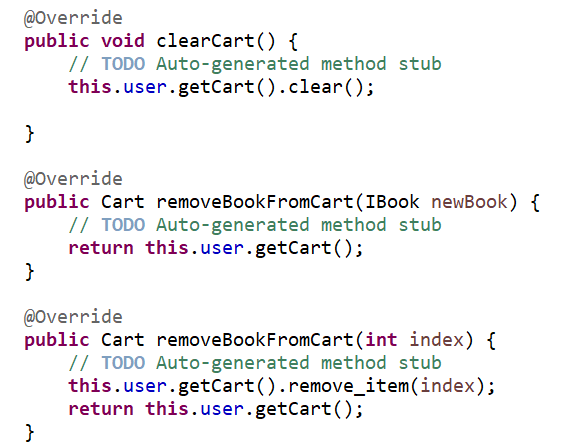
* *Publisher*

Class extends from the person.

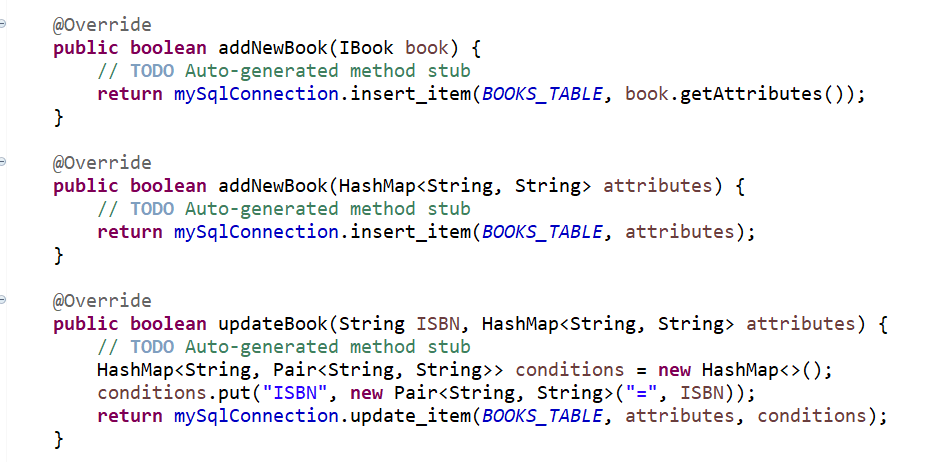
* **Back end:**
* *Book Store*
  + - Singleton class identified in it the main functions of the online bookstore.
    - ***signUp function:***
* Takes the new user information and return true if operation is done successfully and false otherwise.
  + - ***logIn function:***
* Takes the username and password of the user and return the all information of this username if exists in the system.



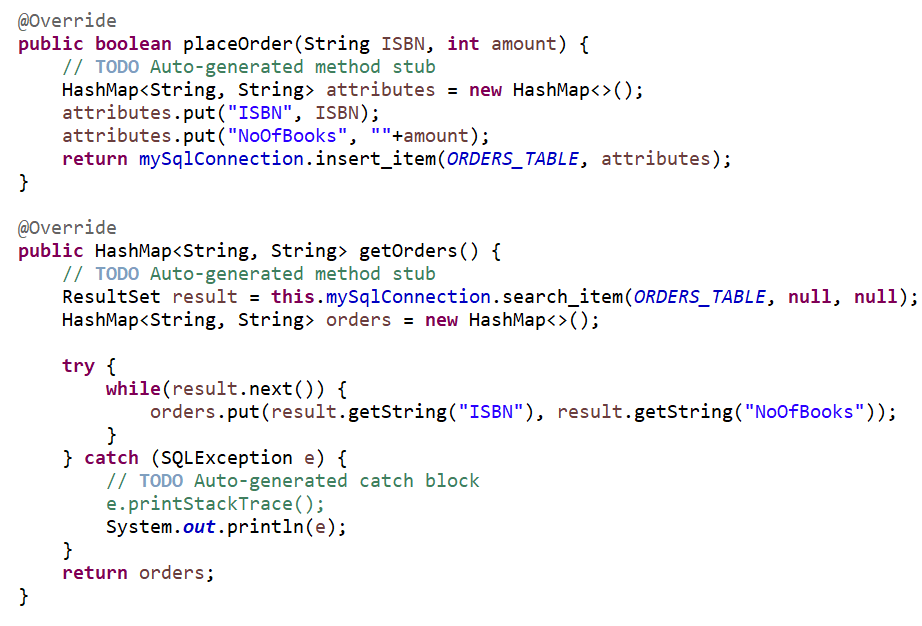
* + - ***updateSettings function:***
*  Takes the new user information and return true if operation is done successfully and false otherwise.
  + - ***demandUser function:***
*  This function adds the current user to promote table to have managers credentials.
  + - ***addBookToCart function:***
* This function adds the selected book to user cart to.
  + - ***chechOut function:***
* This function takes the card number and its expiry date.
* Return true if the information is correct false otherwise.
  + - ***removeBookFromCart function:***
* This function removes the selected book from user cart to.
  + - ***clearCart function:***
* This function removes the selected book from user cart to.

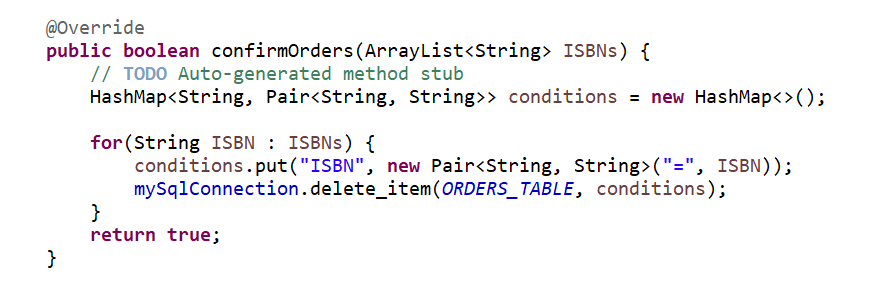


* + - ***search function:***
*  This function to Search for books by any of the book’s attributes.
  + - ***These functions:***
  + Adding new books.
  + Update exited books.



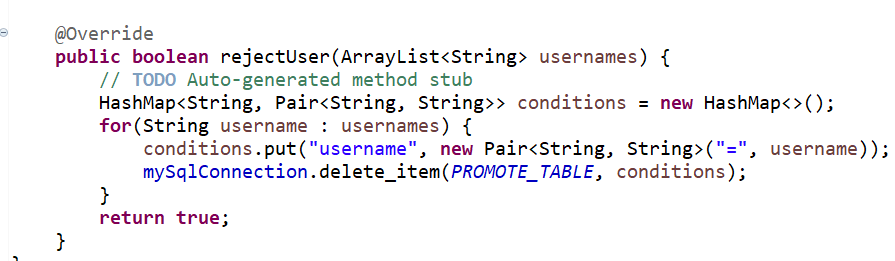
* + - ***These functions:***
  + Place orders.
  + Confirm orders.
  + Get orders.





* + - ***These functions:***
  + Accept request of user to have managers credentials.
  + Reject request of user to have managers credentials.
  + Get user requests.





* *My sql connection*
  + - Singleton class identified in it the connection between the java and MySQL Server.
    - Contains seven functions which implements the search, insertion, delete, update from tables, commit, roll back, and printing SQL exception.
    - ***Search function:***

Takes the table name, attributes of the table and conditions of the search.

Return the result set of the search operation.

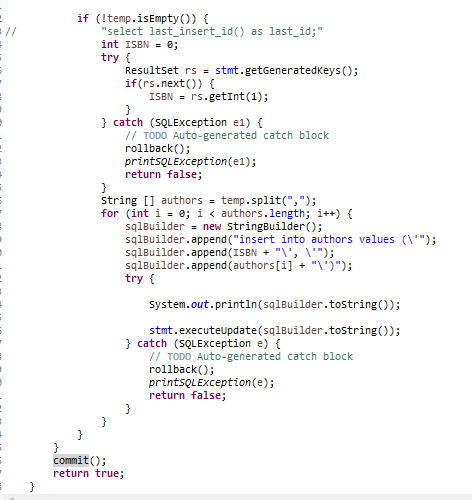


* + - ***Insert function:***

Takes the table name and attributes of the table.

Return the Boolean that the insertion is been done in right way or not.





* + - ***Update function:***

Takes the table name, attributes of the table and conditions of the update.

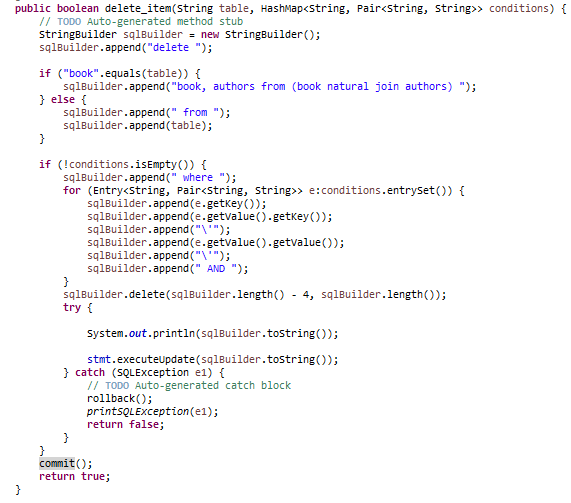
Return the Boolean that the update is been done in right way or not.



* + - ***Delete function:***

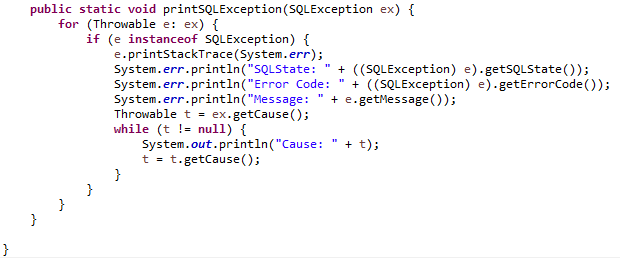
Takes the table name and conditions of the search.

Return the Boolean that the delete is been done in right way or not.

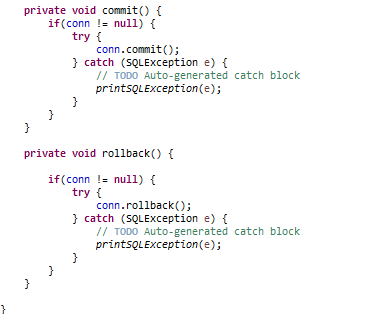


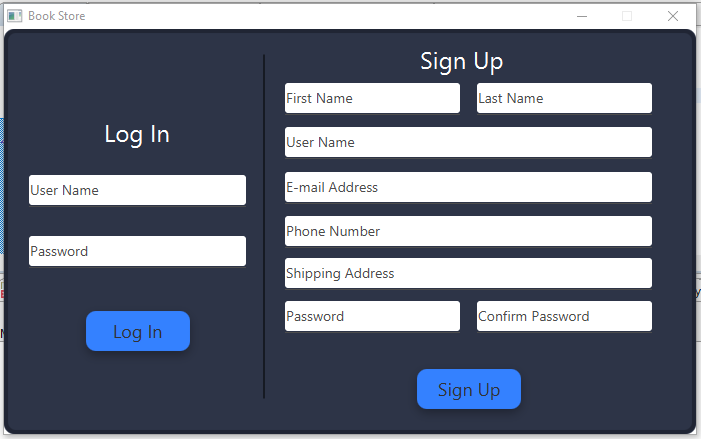
* + - ***Print SQL Exception function:***

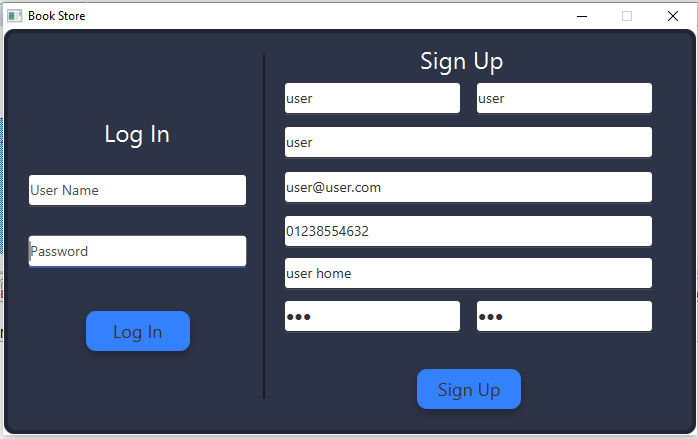
Prints the exception expected from the SQL Server.

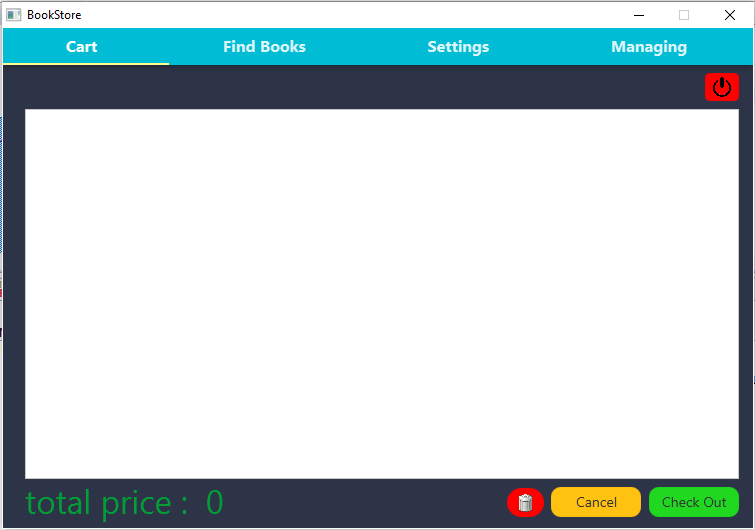
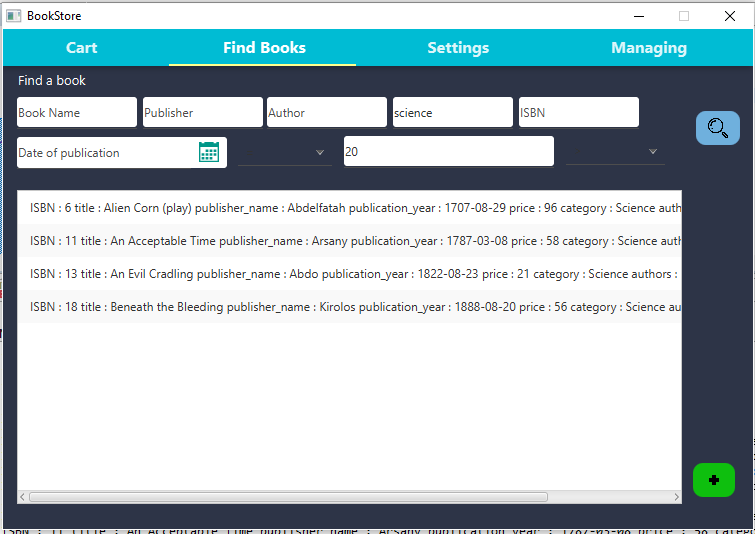
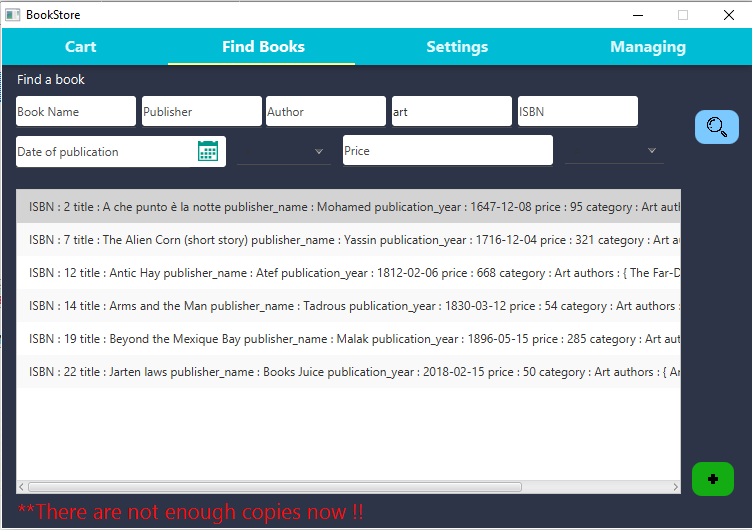
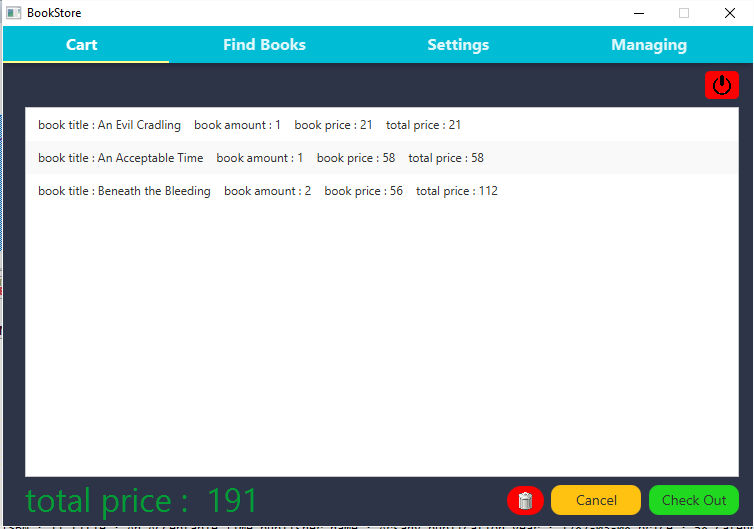
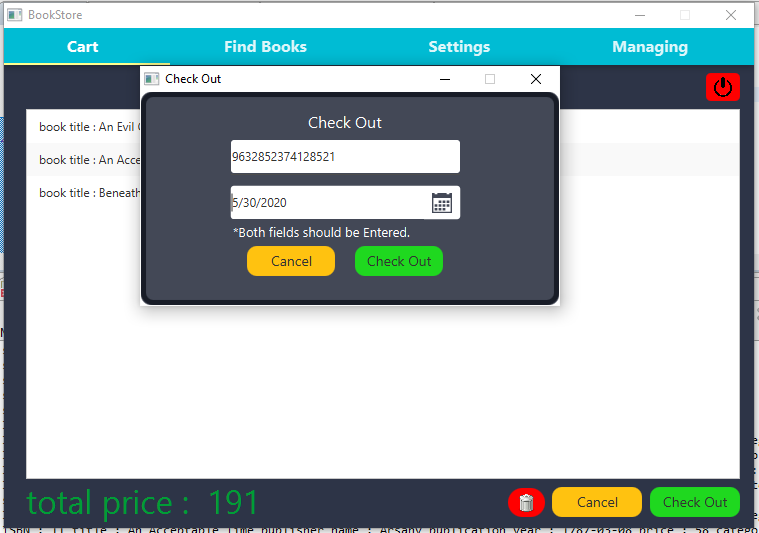


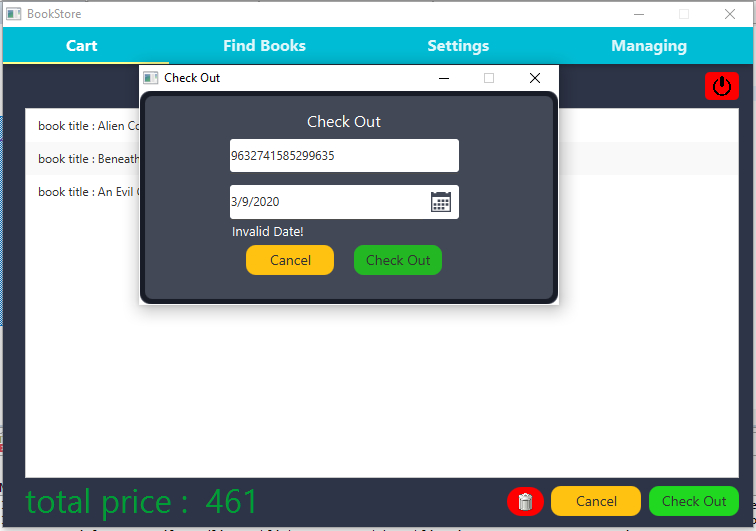
* + - ***Commit and Roll back functions:***
* To commit any action or any transaction did in database.
* To help if there is an error to rollback again to the last consistent point.

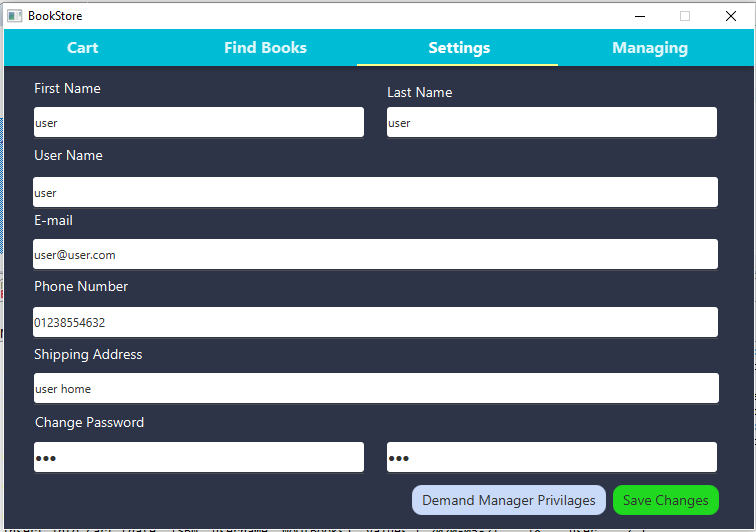


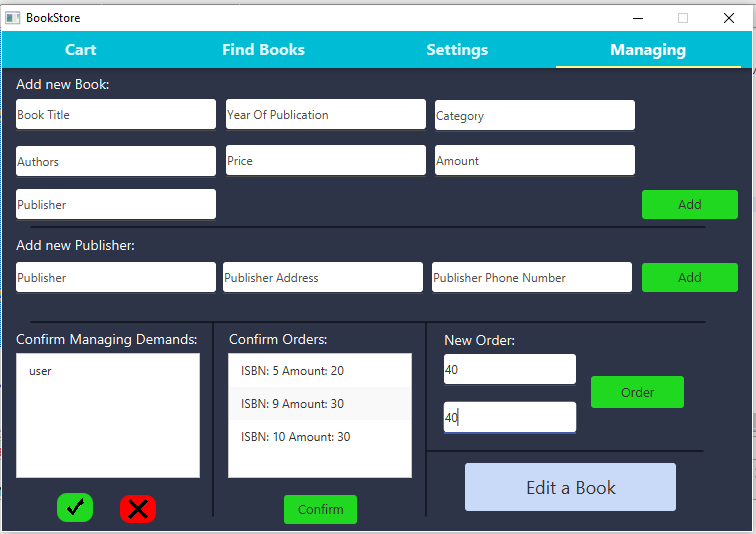
* **GUI:**
* **Login view**
* **SignUp**

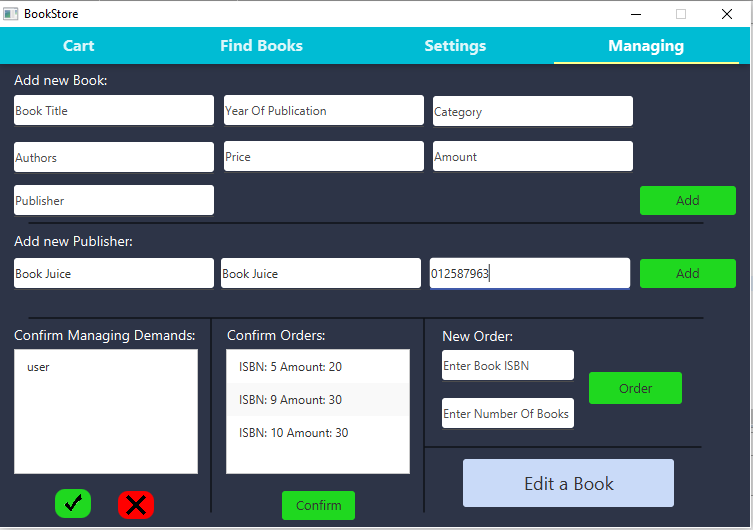
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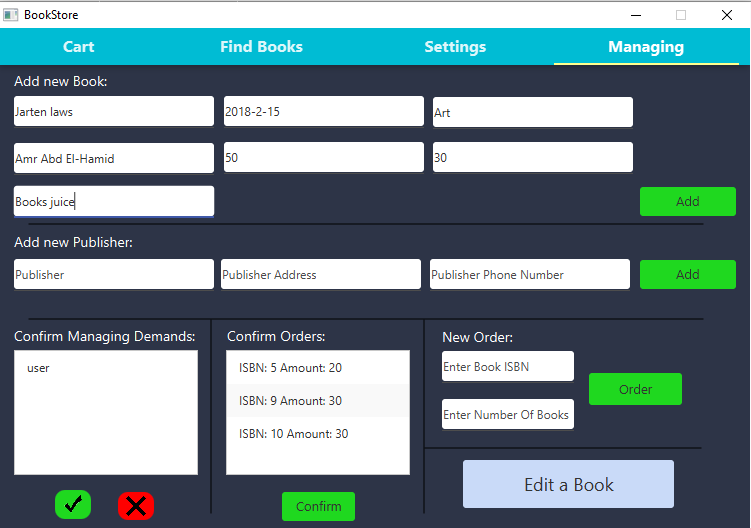
* **Free cart**
* **Search for a book by category**
* **Book out of stock**
* **Cart with books**
* **Checkout**
* **Checkout with invalid credit card**

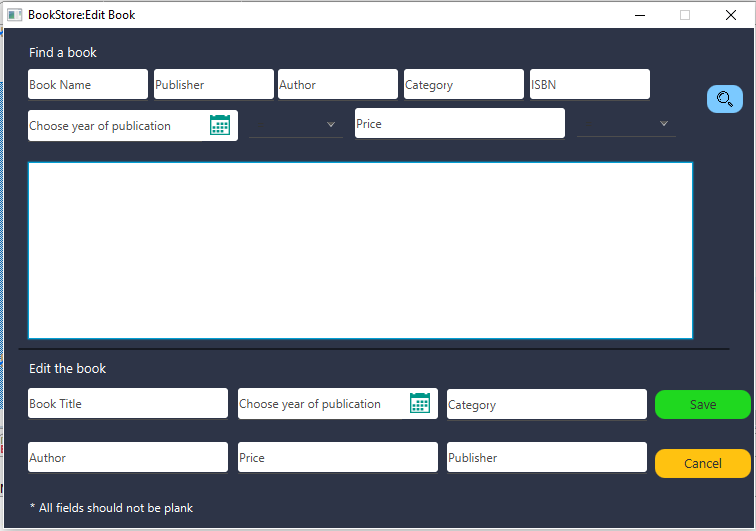
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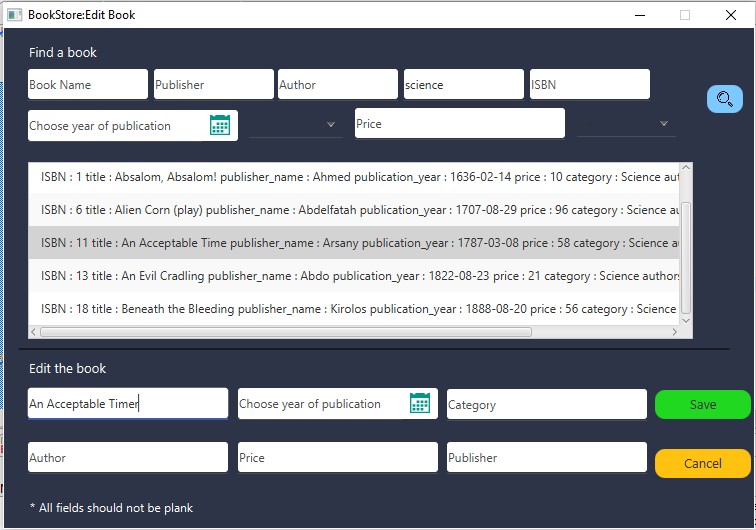
* **User settings**
* **Managing the store frame which is available to the manager**

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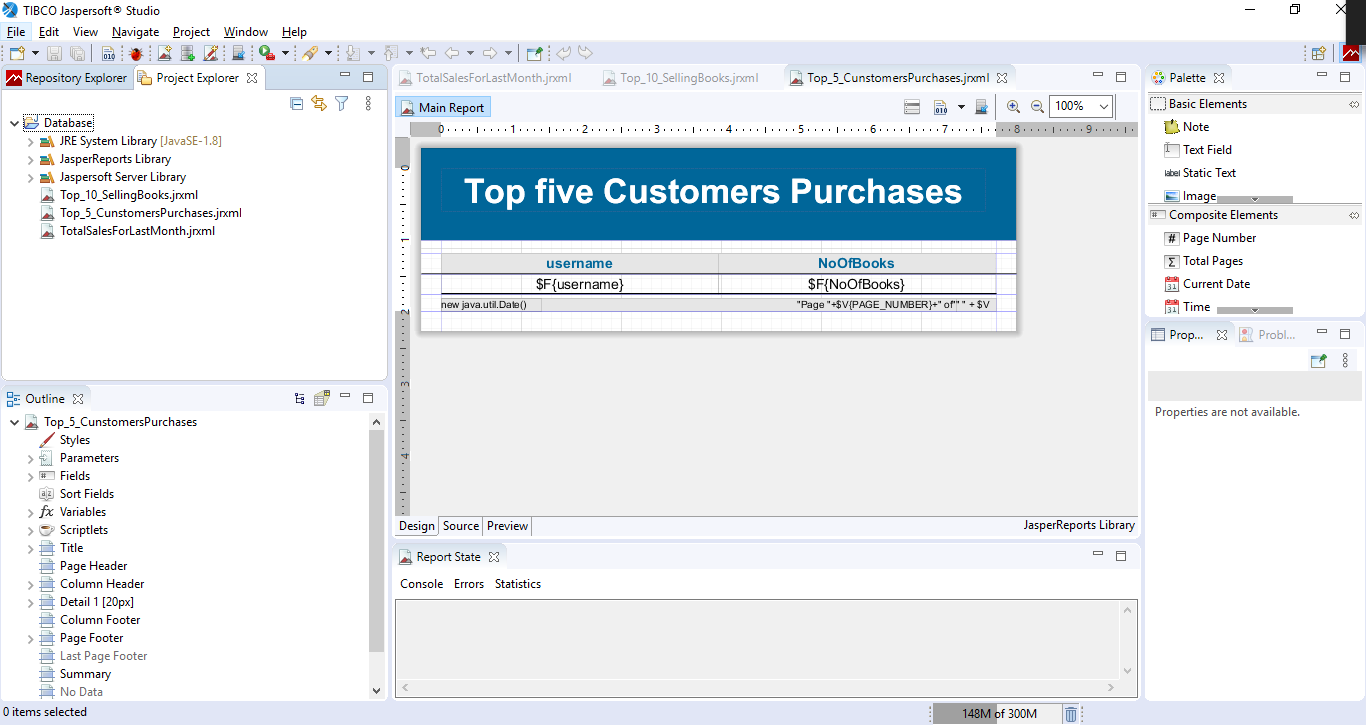
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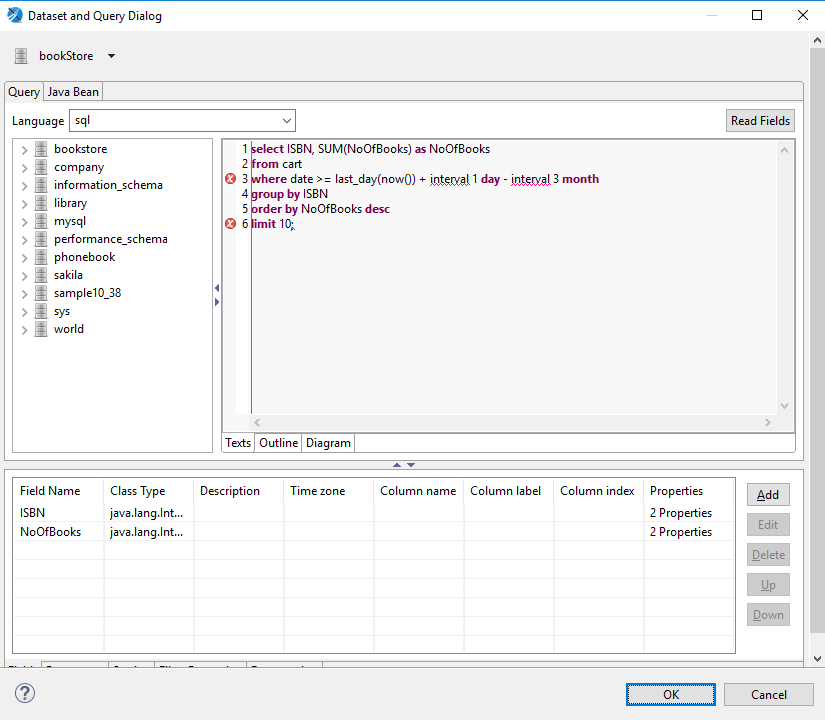
* **Search on a book to edit**

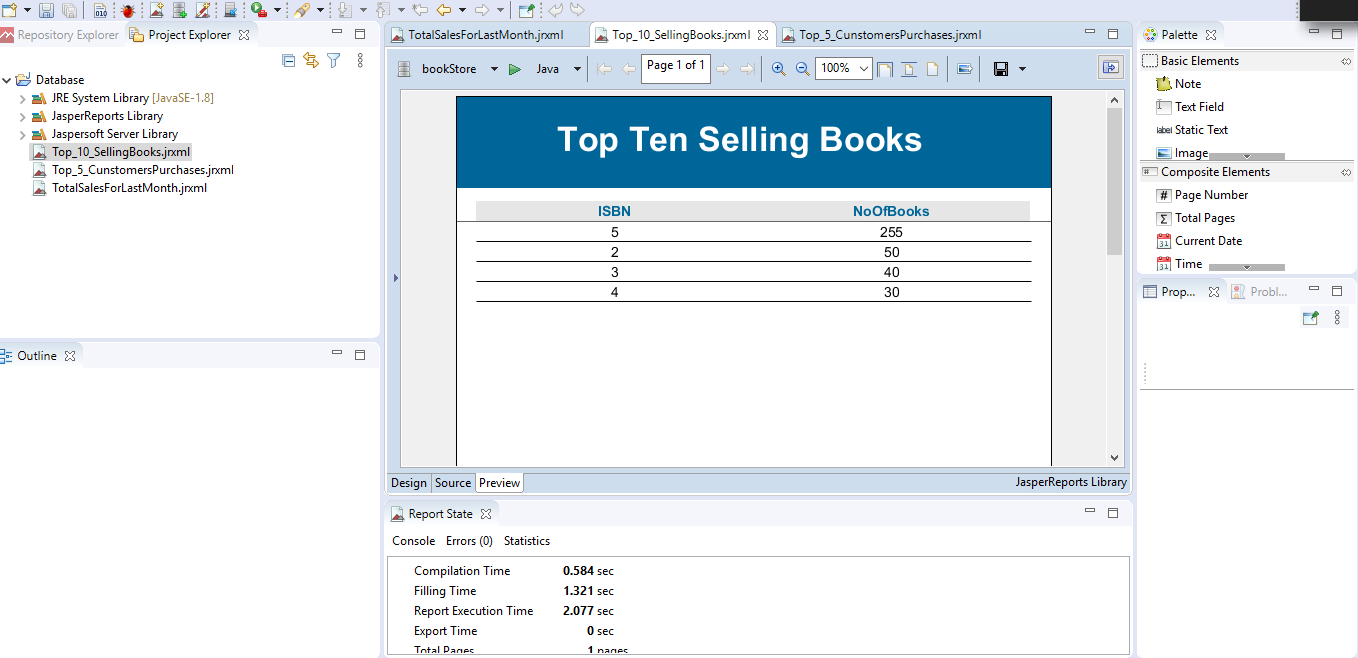
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* **Jasper using Jaspersoft studio:**

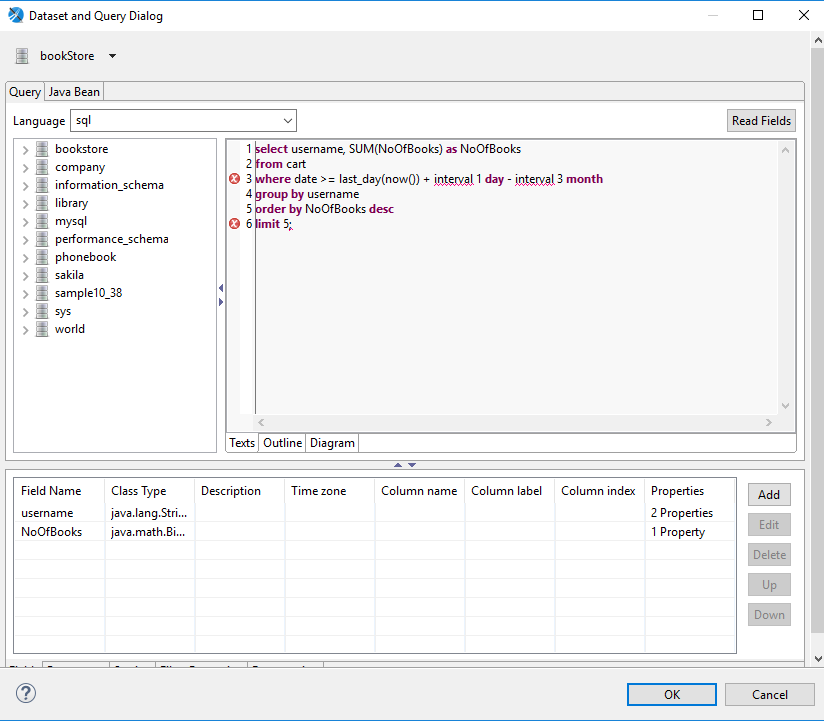


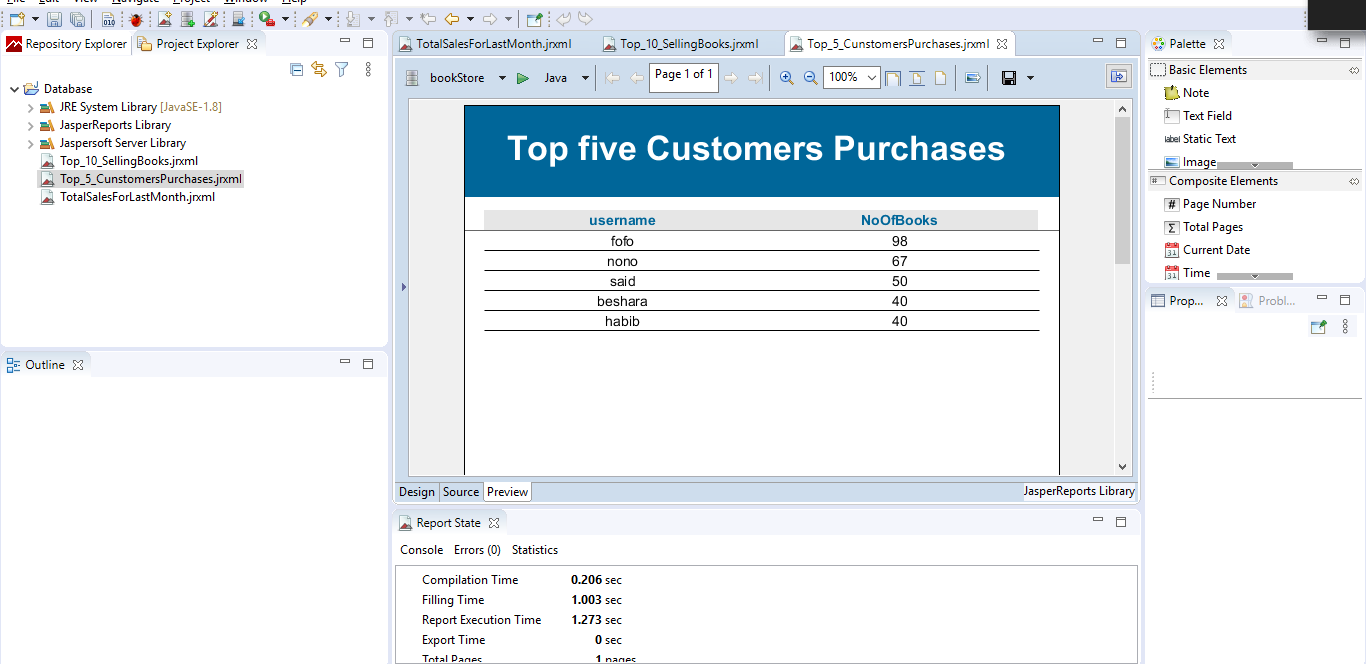
* **Top 10 selling books:**





* **Top 5 customers purchase:**





* **Total sales for last month**

