

# Changes from Assignment 1

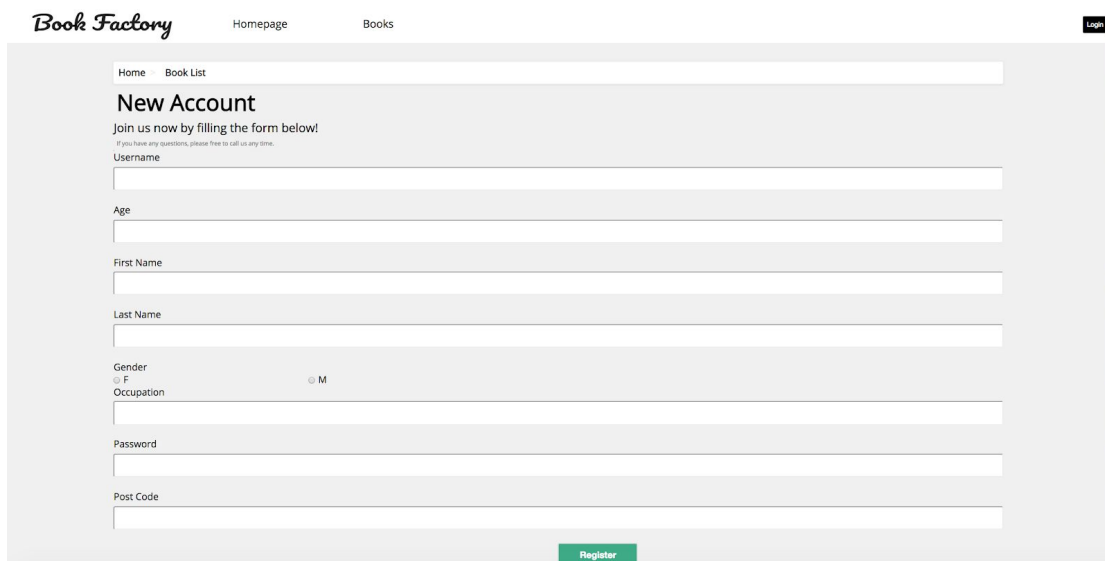
For this assignment, there are not many changes from assignment 1. This website is an ecommerce website which allow users to view, order and purchase books online with their account. We have changed the products on the website for assignment 2 due to time constraint. Initially, we have planned to build a website targeting on young people to sell clothes, accessories, hats etc. However, we found that we do not have time to implement a lot of details, thus we decided to simplify our project to focus on one type of product which is book and develop further by specifying its genre and author, and implement relevant functions as such.

We have also made changes to product management system and user management system on the website. Instead of having an interface to manage information, we decided to manage it from back-end through Cassandra by manipulating the product table (which includes details like bookid, book name, genre, synopsis, price, author and publish date) and the user table (which includes user ID, firstname, lastname, gender, occupation etc).

## Features

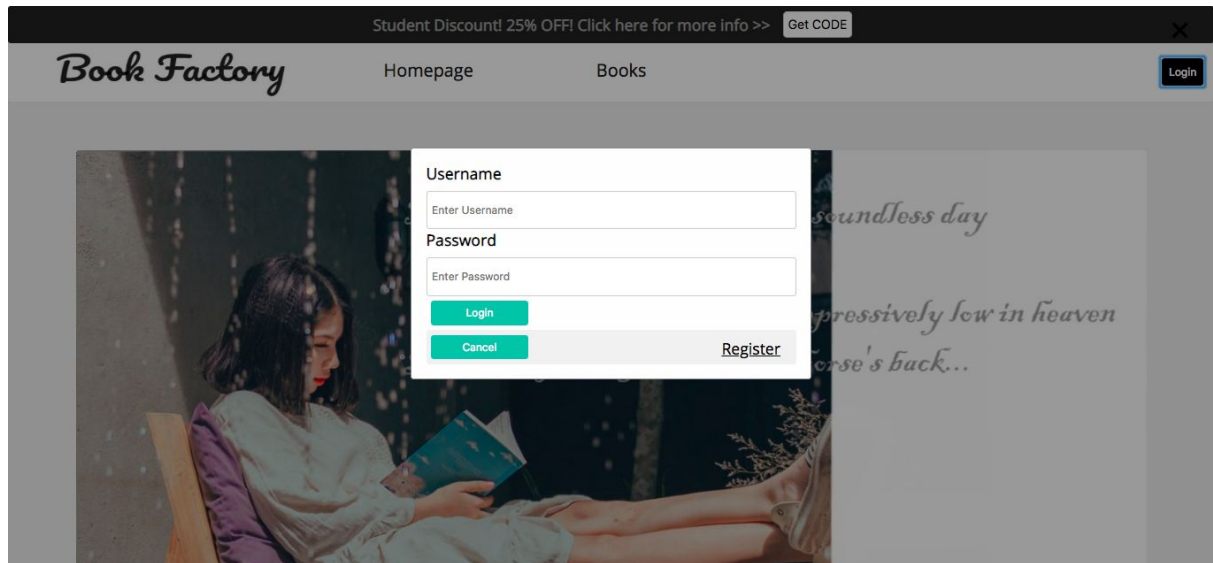
### Register

If the user is new to our website, he can choose to register a new account in register page (as shown below) by clicking on the link “Register”. After inserting their information, a new tuple will be appended into *user table* in Cassandra once they click register button at the bottom of the page, their login information will be stored by the system. The page will jump back to homepage (index.php) afterwards. For convenience, userid, age and post code must be integer, and other attributes are string.



The screenshot shows the 'New Account' registration page for 'Book Factory'. The page has a header with the logo 'Book Factory' and navigation links for 'Homepage' and 'Books'. A 'Login' button is in the top right corner. Below the header, there is a breadcrumb trail 'Home > Book List'. The main heading is 'New Account' with a subtext 'Join us now by filling the form below!' and a small note 'If you have any questions, please free to call us any time.' The form contains the following fields: 'Username', 'Age', 'First Name', 'Last Name', 'Gender' (with radio buttons for 'F' and 'M'), 'Occupation', 'Password', and 'Post Code'. A green 'Register' button is located at the bottom right of the form area.

## Login & Logout



When the user enters the website, there is a login button at top right hand corner of the homepage. Upon clicking the login button, a login panel will appear to allow users enter their username and password. If the user's information has been captured by our system and already exists in our database, a message indicating success login will be displayed upon login.

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Login success.

确定

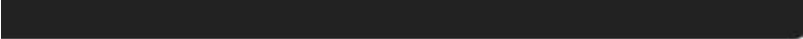
Otherwise, an "Invalid" alert.

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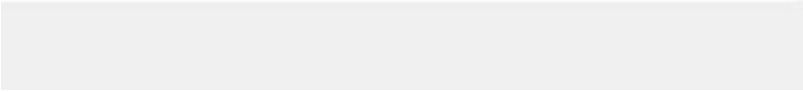

Invalid.

确定

If the user has logged in successfully, the login button will be changed to a logout button and a welcome message will appear. Userid will be stored in cookie.



Welcome:78 Logout



If the user wants to log out of their account and leave the website, he could click on the logout button. After logging out, a login button will replace the logout button. And the session will be destroyed.

## Category

When the users click “Books” in navigation bar, it will lead them to the “Book List” page, and they will be able to view all the books available. Basically, there are a total of 30 books so far distributed on 5 pages with 6 books on each page. There is a sidebar which offer users the option to view book according to their genre which are adventure, biography, romance, fantasy, horror and science fiction. There are also options to view books by authors such as Suzanne Collins, J. K. Rowling, J. R. R. Tolkien and Stephen King. For example, when user clicking on “Adventure” under the Genre panel, all the five adventure books will be displayed. This function is achieved by using materialized view which retrieves all the books whose genres are “adventure”.

In fact, we did six materialized views which should be used to implementing the filter function, but we did not finish the function for all genres due to time constraint. The “adventure” option in the sidebar is a working example to demonstrate the function. The name of materialized views we created for books of different genres are shown below:

search\_by\_adventure,  
search\_by\_biography,  
search\_by\_romance,  
search\_by\_fantasy,  
search\_by\_horror,  
search\_by\_sciencefiction

The name of materialized views we created for books of different authors are shown below:

suzanne\_collins,  
j\_k\_rowling,  
j\_r\_r\_tolkien,  
stephen\_king

[Home](#) [Book List](#)

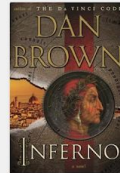
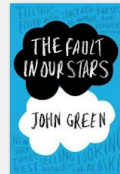
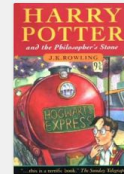
## Genre

All

[Science Fiction](#)  
[Horror](#)  
[Fantasy](#)  
[Romance](#)  
[Narrative](#)  
[Adventure](#)  
[Action](#)

## Genre

All

[Suzanne Collins](#)  
[J. K. Rowling](#)  
[Stephen King](#)  
[J. R. R. Tolkien](#)  
[Narrative](#)  
[Adventure](#)  
[Action](#)Chalk  
16.19Inferno  
10.99The Hunger Games  
14.49Fear: Trump in the White House  
17.99The Fault in Our Stars  
7.99Harry Potter and the  
Philosopher's Stone  
13.25[1](#) [2](#) [3](#) [4](#) [5](#)

Get book detail



**Chalk**  
Paul Cornell

**\$16.19**

Add to bag

#### Book detail


Chalk tells the story of Andrew Waggoner, who suffers a horrifying act of violence at the hands of his school's bullies. In his grief and anger, the boy makes contact with an old and ancient presence, which offers to help make him whole and exact terrible revenge—if he allows it. The occult horror masks a genuine exploration of how trauma can affect a person, cutting them out of the world, instilling violent fantasies of revenge, and leaving psychological wounds that linger long after the

Publication date:Cassandra\Date(seconds=1490054400)

Genre:Horror

ISBN:90943

If the users want to see the details of a specific book, they can click on that book, then it will jump to a new page which the URL is modified from book list page to book detail page with the specific book's ID as shown below. For instance, when the users want to know more details about the book named *Chalk*, they can click on its name, then they will see Chalk's author, price, synopsis, publish date, genre, and ISBN.

 s4522613-phpcass.uqcloud.net/bookDetail.php?id=90943



## Confirm order

Users can add one book to the cart from the book detail page, but only users who have logged in can confirm the order by clicking on the 'confirm order' button. Otherwise, the page will alert user to login and return to homepage.

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Please login.

确定

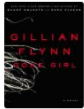
After the button is clicked, the order information along with the user information will be inserted into the *order* table of Cassandra database. A pop-up will show up indicating that the order has been placed successfully.

[Student Discount! 25% OFF! Click here for more info >>](#) [Get CODE](#)

**Book Factory** [Homepage](#) [Books](#)

Home > [Book List](#) [Check Out](#)

### Order Review

Book	Name	Discount	Total
	Gone Girl	\$0.00	\$9.69

[BACK TO BOOK LIST](#) [Confirm Order](#)

### Order Summary

Costs are calculated based on the books you have entered.

Order Total:	\$9.69
Shipping Fee:	\$10
GST 10%:	\$0.9
<b>TOTAL</b>	<b>\$19.9</b>

An algorithm has been created in Spark to accomplish a collaborative filtering technique for a book recommendation function in this website. This algorithm makes use of the Spark MLlib library and is working based on users' order history, which is the order table, to predict user's rating for an item from existing ratings of other users.