Assignment 1	Project Summary
Course	**Web Application & Service Development with Spring Framework v5 - 2020**

Project author		
№	Pseudonym	Face-to-face/ online
1	Actus	online
2	Bactus	online
3	Cactus	online

Project name	Online Bookstore "BookStory"

1. Short project description (Business needs and system features)

Nowadays the need for reading is getting bigger than ever. Online bookstore "BookStory" (BBS) contains a library of books, magazines and textbooks. The system provides ability for viewing, filtering, searching, viewing cart and ordering products. In addition to that it allows users to register, login, logout and administrator to manage them. The system will be developed using **Spring 5 Application Development Framework**. It will implement web-based front-end client using **Thymeleaf/JSP** templates and **jQuery** or **React.js/Vue.js/Angular** JavaScript/TypeScript libraries for asynchronous page data updates. Each page will have a distinct URL, and the routing between pages will be done server side using **SpringMVC/ WebFlux**. The backend will be implemented as a **REST/JSON API** using JSON data serialization. There will be also a real-time event streaming from the server to the web client using **WebFlux** and **Server Sent Events (SSE)/WebSocket** in order to allow the Instructor to monitor test completion progress of students in real time. The main user roles (actors in UML) are:

- *Anonymous User* – can only view the information pages and add items in shopping cart.

- *Regular User* (extends Registered user) – can view the information pages, search and filter products, preview pages of products, view add items in shopping cart, view and write reviews, make order, to view make orders and their details to add address and credit cards, to manage its user profile, to choose how to pay.

- *Administrator* (extends Registered user) – can manage (edit user data and delete) Registered users, add, edit details, delete products, authors and publishers, update the status of the order, add new promotional events.

2. Main Use Cases / Scenarios

Use case name	Brief Descriptions	Actors Involved
2.1. Browse information	The *User* can browse the information views (Home, Authors, Publishers) in BBS.	*All users*
2.2. Register	*Anonymous User* can register in the system by providing a valid e-mail address, first and last name, and choosing username and password.	*Anonymous User*
2.3. Change User Data	*Regular User* can view and edit their profile data such as names,phone numbers and passwords. *Administrator* can view and edit *User Data* of all *Users*.	*Regular User, Administrator*
2.4. Manage Users	*Administrator* can edit unchangeable for the Registered User profile data .	*Administrator*

	Administrator can choose a *User* to manage, and delete User profile.	
2.5. Add new product	*Administrator* can add a new *Product* with all its needed details.	*Administrator*
2.6. Edit and delete products	*Administrator* can edit product data such as: name, authors, price, description, quantity and/or upload photos. *Administrator* can perform delete for chosen product. Then can save the changes.	*Administrator*
2.7. Change order status	*Administrator* can change the status of the order.	*Administrator*
2.8. Add authors	*Administrator* can add a new *Author* with all their needed details.	*Administrator*
2.9. Add publishers	*Administrator* specifies publisher details: name, description and can add products by that publisher.	*Administrator*
2.10. Create promotional events	*Administrator* can create promotional events where different kind of products are on discount.	*Administrator*
2.11. Write reviews	*Regular User* can create a *Review* for a *Product*, by giving it a rating from 1 to 5, and adding a comment to it.	*Regular User*
2.12. Edit and delete reviews	*Administrator* can delete reviews which has inappropriate content. *Regular user* can edit their reviews: change starts or text. They can also perform delete of their reviews.	*Administrator, Regular User*

2.13. Search by author, publisher and product name	All users can search the products filtered by author, publisher and product name.	*All users*
2.14. To filter products	All users can filter products by price, genre and rating.	*All users*
2.15. Preview product	*Anonymous User, Regular User* and *Administrator* can view the additional photos of the product.	*All users*
2.16. Add items to shopping cart	Anonymous and regular users alike can add items(products) to the shopping cart while browsing the site.	*Anonymous User, Regular User*
2.17. View and edit shopping cart	Both *Anonymous User and Regular User* can see and change the contents in their cart - remove items or change the quantity of a certain item.	*Anonymous User, Regular User*
2.18. Add addresses	*Regular User* can create new address used for delivery by specifying its details: city, street, floor.	*Regular User*
2.19. Add credit cards	Regular users can safe their credit cards information.	*Regular User*
2.20. Make an order	*Regular User* can fill the form for order, choose a payment option and choose delivery.	*Regular User*
2.21. View list orders	*Regular Users* can see all their current orders and past orders.	*Regular User*
2.22. View order details	*Regular User* can view details for specified order: number, status, products..	*Regular User*
2.23. Change delivery status	*Administrator* can change the status of the delivery.	*Admin*

3. Main Views (Frontend)		
View name	**Brief Descriptions**	**URI**
3.1. Home	Welcome banner, show promotions.	/
3.2. Product	Presents all current products in the store.	/products
3.3. Cart	Presents a view of items added to the shopping cart and edit cart content by changing quantity of added items and remove selected ones.	/cart
3.4. Authors	Presents list of authors, whose products are in the store.	/authors
3.5. Publishers	Presents all publishers, whose products are in the store.	/publishers
3.6. Orders	Presents a view of list of ordered items	/orders
3.7. Order Details	Presents a form with order details - personal info, products, address, payment option and calculated the total bill with delivery.	/order
3.8. User Registration	Presents a form allowing the users to register.	/register
3.9. Login	Presents a view allowing the users to login.	/login
3.10. User Data	Provides ability to view and edit personal *User Data*.	/personal
3.11. Users	Delete users and edit user info (Admin only).	/users

4. API Resources (Backend)		
View name	**Brief Descriptions**	**URI**
4.1. Users	GET *User Data* for all users. Available only for *Administrators*.	*/api/users*
4.2. User	GET, PUT, DELETE *User Data* for *User* with specified *userId*, according to restrictions described in UCs.	*/api/users/{userId}*
4.3. Login	POST *User Credentials* (username and password).	*/api/login*
4.4. Logout	POST a logout request.	*/api/logout*
4.5. Products	GET all products and POST new *Product* (Id is auto-filled by *BBS* and modified entity is returned as result from POST request).	*/api/products*
4.6. Product	GET product by product id, PUT edit product details, DELETE said product.	*/api/products/{id}*
4.7. Orders	GET all orders	/api/orders
4.8. Order	GET order by order id, PUT edit order by order id, DELETE order by order id(Admin only for del)	*/api/orders/{id}*
4.9 Order Items	GET all order items in the cart	/api/cart
4.10. Order Item	GET all Order Items, PUT edit an Order Item by changing its quantity in the cart, DELETE to remove Order Item.	/api/cart/{id}
4.11. Create Order	POST new Order(Id is auto-filled by *BBS* and modified entity is returned as result from POST request).	/api/order
4.12. Authors	GET all authors, POST a new author	/api/authors
4.13. Author	GET author by id. PUT, DELETE Author by author id (Admin).	*/api/authors/{id}*

4.14. Publishers	GET all publishers, POST a new publisher	/api/publishers
4.15. Publisher	GET a publisher by id, PUT new publisher info (Admin only), DELETE (Admin only)	/api/publishers/{id}
4.16. Address	GET a address by id, PUT new address info (Admin only), DELETE (Admin only)	/api/address/{id}
4.17. Addresses	GET all addresses, POST a new addresses	api/addresses
4.18. Promotion	GET a promotion by id, PUT new promotion info (Admin only), DELETE (Admin only)	api/promotion/{id}
4.19. Promotions	GET all promotions, POST a new promotion	api/promotions
4.20. Credit card	GET a credit card by id, PUT new credit card info (Admin only), DELETE (Admin only)	api/card/{id}
4.21. Credit cards	GET all credit cards, POST a new credit card	api/cards
4.22. Review	GET a review by id, PUT new review info (Admin only), DELETE (Admin only)	api/review/{id}
4.23. Reviews	GET all reviews, POST a new review	api/reviews
4.24. Delivery	GET a delivery by id, PUT new delivery info (Admin only), DELETE (Admin only)	api/delivery/{id}
4.25. Deliveries	GET all delivery , POST a new delivery	api/deliveries