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| Assignment 1 | | Project Summary | |
| Course | | Fullstack Application Development with Node.js + Express.js + React.js - 2022 | |
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| Project author | | | |
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| Project name | Online Clothing Shop |

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| 1. Short project description (Business needs and system features) |
| Shopping has become an indispensable part of everyone's life. Most people prefer online shopping because it is easy, safe, and much more convenient. The fashion site that will be created aims to meet the requirements of customers by providing them with the opportunity to register, purchase, and view new or specific products.  The system will be developed as a *Single Page Application (SPA)* using ***React.js*** as front-end, and ***Node.js + express*** as backend technologies. Each view will have a distinct URL, and the routing between pages will be done client side using ***React Router***. The backend will be implemented as a ***REST/JSON API*** using JSON data serialization.  The main user roles (actors in UML) are:  •    *Anonymous* - can browse all fashion products, and add to cart (no option to buy).  •    *Client* (*Registered User)* - can browse all fashion products, buy them, add to favorites, access their profile and change their own data.  •    *Worker* - can manage (Create, Edit, and Delete) all *Product data*, change the status of the orders, access their profile and change their own data.  •    *Admin* – can manage (Create, Edit, and Delete) *all User, Product, and Order data.* Access to their own profile and change their data. |

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| 1. Main Use Cases / Scenarios | | |
| **Use case name** | **Brief Descriptions** | **Actors Involved** |
| * 1. **Register User** | **Anonymous** user can register in the system by providing a valid first and last name, email, gender, date of birth, and choose password. By default, all newly registered users have the role of **Client**, and the profile status is **Active**.  Admin also can register a user by entering their details correctly. | *Anonymous User and Admin* |
| * 1. **Change User Data** | Registered Users can view and edit their personal User Data.  Admins can view and edit the User data of all users, except their own passwords, and assign them a role: **Admin**, **Client, or Worker**.  Additionally, the admin can change **users' status** to Active, Suspended, or Deactivated. | *Registered Users* |
| * 1. **Manage Users** | **Admin** can:   * View and filter users based on different criteria: role and status. * Search for users by name (first and last), and email. * Edit and delete a user. * Add new user | *Admin* |
| * 1. **Add Product** | Users with role admin or worker can create a new product by inputting the following information: product name, description (optional), the quantity for the corresponding size, color, price, image, and category. | *Admin, and Worker* |
| * 1. **Manage Product** | **Admin, Worker, Client, and** **Anonymous users** can**:**   * View and filter products based on different criteria: category, color, and price. * Search for products by name or category.   In addition, **Admin and Worker** can:   * Edit and delete a product. * Add a new product   In addition, the **Client** can:   * Adds product to the cart by selecting size and quantity * Add product to favorite * Add a review   In addition, **Anonymous** user can:   * Adds product to the cart by selecting the size and quantity (is not allowed to create an order, it is necessary to log in) | *All Users* |
| * 1. **Add Product to Favorites** | When the **Client** likes a product, he can add it to the **Favorites view** (by pressing the Add to Favorites button). | *Client* |
| * 1. **Manage Product reviews** | When it clicks on the **Reviews button** on the product card, the users can view all added reviews.  In addition, **Admin** can:   * Delete a review.   In addition, the **Client** (Registered User) can:   * Add a new review including content and rating (a number from 1 to 5). | *All Users* |
| * 1. **View Cart** | Anonymous and Clients can access the **Cart view**, where they can see the products they have chosen to purchase. To be able to complete their order, they will need to log in to the system. | *Anonymous and Clients* |
| * 1. **Create Order** | After the client has selected the products he wants to buy, he needs to fill out the form with the following information: recipient, region, town, address, description (optional), and type of delivery (to Address or to the Office).  If the client wants an **invoice**, the following additional data are required: company name, VAT, and UIC code. | *Client* |
| * 1. **Manage Order** | **Admin** can:   * View all orders * Edit and delete the orders * Change orders status   **Client** can:   * View their own orders * Can refuse an order by changing the status to **Cancel**   **Worker** can:   * Change only orders status | *Registered Users* |

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| 1. Main Views (SPA Frontend) | | |
| **View name** | **Brief Descriptions** | **URI** |
| * 1. **Home** | Presents introductory information about the fashion site with relevant images and content. | / |
| * 1. **Products** | Represents all fashion products, as different users can perform different manipulations.  Customers can view, and add the products to the cart, while administrators and workers can add, update and delete products (CRUD). | */products* |
| * 1. **Cart** | Presents all the products that the user (client) has chosen to buy, with the possibility to complete the order by entering additional data. | */cart* |
| * 1. **Favorites** | Represents the products shown in an appropriate card that the user has selected as favorites (only visible to the client).  The customer has the option to remove the product from favorites. | */favorites* |
| * 1. **My-profile** | Presents a view where users can browse and modify their data.  Clients can also view all of their orders. | */my-profile* |
| * 1. **Login** | Presents a view allowing the users to log in with the correct email and password. | */login* |
| * 1. **Register** | Presents a view that allows anonymous users to register on the site in order to create orders. | */register* |
| * 1. **Logout** | The user logs out of their account and is redirected to the Home page. | */logout* |
| * 1. **Users** | Provides the ability to manage (CRUD) all users and their user data (only available to Admin). | */users* |
| * 1. **Orders** | Presents in real-time, all made orders. (Admin and Worker only)  Admin can view, edit, and delete orders.  The worker can only view and change the status of the orders. | */orders* |

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| 1. API Resources (Node.js Backend) | | |
| **View name** | **Brief Descriptions** | **URI** |
| * 1. **Users** | GET User data for all users, and POST new User data (id should be generated automatically by the backend and should NOT be changeable). Available only for Admin. | */api/users* |
| * 1. **User** | GET, PUT, and DELETE *User data* for *User* with specified *userId*. | */api/users/{userId}* |
| * 1. **Register** | POST User details (first name, last name, email, gender, date of birth and password) are required and a valid security token must be given to be used in subsequent API requests. | */api/register* |
| * 1. **Login** | POST *User Credentials* (e-mail address and password) and receive a valid *Security Token* to use in subsequent API requests. | */api/login* |
| * 1. **Logout** | POST a logout request for ending the active session with *OKTS,* and invalidating the issued *Security Token*. | */api/logout* |
| * 1. **Products** | GET Product data for all products, and POST new Product data (available only for admin and worker). | */api/products* |
| * 1. **Product** | GET, PUT, and DELETE *Product data* for *Product* with specified *productId*. | */api/products/{productId}* |
| * 1. **Favorites** | GET Favorite Products for given userId and POST new Favorite product. Available only for clients. | */api/users/{userId}/favorites* |
| * 1. **Favorite** | GET, DELETE Favorite product for given User with userId. | */api/users/{userId}/favorites/{productId}* |
| * 1. **Orders** | GET All Orders. Available only for admin and worker. | */api/orders* |
| * 1. **Order** | Admin can:   * GET, PUT, and DELETE given order   Worker can:   * GET, PUT (can only change the status of the order) | */api/orders/{orderId}* |
| * 1. **Orders for given user** | GET All Orders for given User with specified userId. | */api/users/{userId}/orders* |
| * 1. **Carts** | GET Products, which the user has added to the cart, POST new Products to the cart. | */api/cart* |
| * 1. **Cart** | GET, PUT, DELETE Product from the cart. | */api/cart/{carttId}* |
| * 1. **Reviews** | GET All reviews for a given product and POST new reviews (available for client). | */api/products/{productId}/reviews* |
| * 1. **Review** | GET, PUT, DELETE given review. | */api/products/{productId}/reviews/{reviewId}* |