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| Assignment 1 | Project Summary |
| Course | **Web Application & Service Development with Spring Framework v5** **- 2019** |

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| Project author | |  |
| № | Pseudonym | Face-to-face/ online |
| 1 | fchitakova | face-to-face |

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| Project name | Gift Me |

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| 1. Short project description (Business needs and system features) |
| The Internet has a huge impact on people to acquire goods and services in ever-increasing amounts. But it can also be used for challenging consumerism and encouraging reusing inventory and stocks.  The ***Gift Me*** system provides the ability for people to gift to others their unused stocks and items as well as get gifts from others.  **Gift Me** also allows ***users*** to register, create friendships (one to one friendships and group friendships) and post items which they want to give away, and ***administrators*** to manage users and their content.  The system will be developed using ***Spring 5 Application Development Framework***.It will implement web-based front-end client using ***Thymeleaf*** templates and ***jQuery*** JavaScript 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***. 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 users to get notifications for friendship/group invitations or for someone being interested in a gift they have posted, in real time. The main user roles are:

***Anonymous User*** – can only view the Home Page of the application (which reveals its intent) and login/register.

***User*** (extends *Registered User*) can:

* add friends;
* create groups and manage the members of that group;
* post gift items on the gifts feed/ group (of which he/she is member);
* click “Take it” on their friends gifts or on gifts posted in groups;
* search for people, groups or items by keyword..
* Report gift items, people, groups

***Administrator*** (extends *Registered User*) – can manage (create, edit user data and delete) all *Registered Users*,*Groups* and *Gifts* as well as see Reports Page.

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| 2. Main Use Cases / Scenarios | |  |
| **Use case name** | **Brief Descriptions** | **Actors Involved** |
| **2.1. See information** | *Anonymous User* can only see the HomePage.  *User* can see the information views(Gifts Feed, My Active Gifts, Given Gifts, Received Gifts,Notifications, User Data, My friends, My groups).  *User* can see specific user’s gifts or gifts in specific groups by clicking on friends name or group name( found via Search or on corresponding Friends/Groups Pages.)  The *Administrator* all information for all users and groups + Reports Page. | *Anonymous User, Registered User, Administrator* |
| **2.2. Register** | *Anonymous User* can register in the system by providing a valid e-mail address and phone number, first and last name, and choosing password.  *Administrator* can register new user by entering *User Data*. | *Anonymous User, Administrator* |
| **2.3. Change User Data** | *Registered User* can view and edit her personal *User Data*.  *Administrator* can view and edit *User Data* of all *Users;* delete their posts or remove them from groups, delete profiles. | *Registered User, Administrator* |

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| **2.4. Manage Users** | *Administrator* can browse and filter users based on different criteria: first and last name, email.  *Administrator* can choose a *User* to manage, and can manage the chosen User - edit (using Change User Data UC) or delete.  *Administrator* can create a new user using *Register UC*. | *Administrator* |
| **2.5. Create,**  **participate in and**  **manage groups** | *User* can create groups and accept/reject group membership requests, but only if he/she is the creator.  Every *User,* which is member of a groupcan invite friends to the group.  *Administrator* can delete groups, if it is necessary.  *User* can send group membership requests to any group.  *User* can accept/reject group membership requests sent to him/her, which can be seen on *Groups View*.  *User* can leave the group at any time.  *Administrator* can browse and filter *Groups* based on different criteria: name of *Group,* creation date, etc. | *Administrator, User* |
| **2.6. Send friendship requests and**  **accept/reject**  **received requests** | *User* can send friendship request to other found via Search(Using Search information UC).  *User* can accept/reject friendship requests sent to him/her, which can be seen on *Friendships View*.  *User* can cancel any friendship at any time. | *User* |

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| **2.7. Search information** | The *User/Administrator* can search for users/groups/gift tems by providing search keywords and selecting what is searched (users, groups or gift items) and see the results on the *Search Results* page.  Items shown as search result to the *User* are only the ones which are visible for the user(e.g. items posted from user’s friends or posted in some of the groups of which the user is member).  *Administrator* can find and see everything posted from any user . | *User, Administrator* |
| **2.8. Post gifts and manage them** | *User* can post gift items on the Gifts Feed or in a group, which he/she participates in. Gift Items posted on the Gifts Feed are only visible for user’s friends.Gift Items posted in a group page are only visible for the group members.  *User* can remove his/her active items. Unactive(already taken) items are removed automatically.  *Administrator* can remove gift items, which are not legit. | *User, Administrator* |
| **2.9. Take gift item** | *User* can take a gift item by clicking “Take it” on it.  Taking a gift makes it unactive immediately and sends *Notification* to gift’s owner containing contact information of the user, which has clicked “Take it”. | *User* |
| **2.10. Report user/group/gifts** | *User* can report other users or groups for posting not legit posts or a particular gift item for not being legit.  Reporting will send notification to the *Administrator*, which can review and choose how to further handle the issue. | *User* |

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| 3. Main Views (Frontend) | |  |
| **View name** | **Brief Descriptions** | **URI** |
| **3.1. Home** | Presents the introductory information for the purpose of the system as well as detailed instructions on how to start using it.  Prominently offers ability to register and login. | / |

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| **3.2. Gifts Feed** | Presents in real time active(not taken) gifts posted by user’s friends and himself.  Offers following abilities;   * Browse, choose, read, update(by clicking ‘Take ’ it) others’ gift posts * Browse,choose, create, read, update, delete(CRUD) for own posts | */gifts-feed* |
| **3.3. My Active Gifts** | Presents to user his/her active gifts.  *User* can remove a gift at any time as defined by *Post gifts and manage the UC*. | */active-gifts* |
| **3.4. Given Gifts** | Presents to *User* his given gifts history which reveals in chronological order when and who has taken his gift items.  Given gifts are visible only to the *User* himself and *Administrator*. | */given-gifts* |
| **3.5. Received Gifts** | Presents to *User* his received gifts history which reveals in chronological order when and whom gifts he has taken.  Received gifts are visible only to the User himself and *Administrator*. | */received-gifts* |
| **3.6. Login** | Presents a view allowing the users to login. | */login* |
| **3.7. User Data** | Provides ability to view and edit personal *User Data.* | */personal* |
| **3.8. My Friends** | Presents ability to *Users* to view their friend list as well as to click on any friend name to see list of his active gifts.  This Page is only visible to User himself.(Other users cannot see friendlists ot others). | */friends* |
| **3.9. User Registration** | Presents a view allowing the *Anonymous Users* to register. | */register* |
| **3.10. Users** | Presents ability to manage (CRUD) Users and their User Data (available for *Administrators* only, as described in UCs). | */users* |
| **3.11. Reports** | Presents reports from *Users* to *Administators*.  (This view available only for *Administrators*) | */reports* |

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| **3.12. My Groups** | Presents ability to *Users* to view list containing all the groups in which the user participates as well as to click on any group’s name and view the gifts posted there.  Users can see only own group lists. Group lists of other users are not available for others. | */groups* |
| **3.13. Notifications** | Presents the latest news for taken gifts or received friends/groups requests or accepted friendships/group requests. | */notification* |
| **3.14. Groups** | Presents ability to manage (CRUD) Groups and posts, posted on them (available for *Administrators* only, as described in UCs). | */groups* |

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| 4. API Resources (Node.js Backend) | | |
| **View name** | **Brief Descriptions** | **URI** |
| **4.1. Users** | GET *User Data* for all users, POST new *User Data* (Id is auto-filled by *GiftMe* and modified entity is returned as result from POST request), DELETE *User Data*.  Available only for *Administrators*. | */api/users* |
| **4.2. Groups** | GET,POST and DELETE gift post or group.  As described in the UCs, *Administrators* can see all groups, and users can only see groups, in which they participate and delete only the groups of which they are creator. | */api/groups* |
| **4.3. User** | GET,POST, PUT, DELETE *User Data* for *User* with specified *userId*, according to restrictions described in UCs. | */api/users/{userId}* |
| **4.4. Group Gifts** | GET,POST,PUT, DELETE *Groups* with specified *groupId*, according to restrictions described in UCs. | */api/groups/{groupId}/gifts-feed* |
| **4.5. Group Members** | GET,POST, PUT, DELETE *Groups* members with specified *groupId*, according to restrictions described in UCs. | */api/groups/{groupId}/members* |
| **4.6. Friends** | GET,PUT,DELETE friends as described in the UCs. | */api/friends* |
| **4.7. Login** | POST *User Credentials* (username and password) and receive a response if they are valid. | */api/login* |
| **4.8. Register** | POST all necessary data(described in Register UCs) and receive a response if they are valid. | */apiregister* |
| **4.9. Logout** | POST a logout request for ending the active session with *GftMe.* | */api/logout* |
| **4.10. Report** | GET, POST, PUT, DELETE *Reports* as described in Report UC.  All reports are visible to *Administrators* only. | */api/reports* |

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| **4.11.** | **Notifications** | SSE event streaming of real time events in the system as being added as friend, being accepted in a group or any of user’s gifts is taken. | */api/notifications* |

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| **4.12.** | **Gifts** | SSE event streaming of real time gift posting events. GET, POST, PUT, DELETE *Gifts* as described in Post gifts and manage then UC. | */api/gifts-feed* |

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| **4.13.** | **Gift** | GET, POST, PUT, DELETE *Gifts* as described in Post gifts and manage then UC. | */api/ gifts-feed/{giftId}*  */api/active-gifts/{giftId}*  */api/given-gifts/{giftId}* |

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| **4.14.** | **My Active Gifts** | GET, POST, PUT, DELETE *Gifts* as described in Post gifts and manage then UC. | */api/active-gifts* |

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| **4.15.** | **Given Gifts** | GET, DELETE *Gifts* as described in Post gifts and manage then UC. | */api/given-gifts* |

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| **4.16.** | **Gifts available from friendships**  **(friends/groups)** | GET, PUT *Gifts* as described in Post gifts and manage then UC. | */api/friends/{friendId}/active-gifts*  */api/groups/{groupId}/active-gifts* |