Software Requirements Specification

*For DIYideas – single page application*

DIYideas SPA is a project undertaken as a mandatory requirement for the course “Angular 6 Fundamentals ” in SoftUni.

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Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Tatyana Milanova | 15/08/18 | Initial Draft | 0.1 |
| Tatyana Milanova | 23/08/18 | Requirement Compliance Matrix | 0.2 |
|  |  |  |  |

\* to be added

4. External Interface Requirements

4.1 User Interfaces

4.2 Hardware Interfaces

4.3 Software Interfaces

4.4 Communications Interfaces

5. Other Nonfunctional Requirements

5.1 Performance Requirements

5.2 Security Requirements

6. Optional Requirements

# Introduction

## Purpose

The SRS is describing the development of DIYideas website. It contains also prototype UI which is very useful for the customer to know about front-end view.

## Scope

The project is aimed to provide a central place for search, add and edit DIY projects. It therefore is a web application that should be compatible with majority of browsers to provide user friendly Interface for project administrator, project leaders and project members working far apart all around the world.

## Intended Audience

This SRS will be used by other students, trainers and assistants.

The SRS contains a detailed description of the software development and required components with suggested feature inclusions. Detailed interface diagrams are included to show how the software will interact with the user, hardware, other software and methods of communication.

# Business requirements

## Overall Description

DIYideas is free website that requires registration to use. Users can upload, save, search, and manage different ideas for DIY projects. When choose DIY (do it yourself) project, user can add all needed ingredients to shopping list.

The public part is visible without authentication. This public part includes the application start page with last added projects with search form, the user login and user registration forms.

Registered users have personal area in the web application accessible after successful login. This area hold:

- User’s profiles management functionality;

- The user's projects with ability to create edit and delete ideas;

- List of other users ideas with ability to view, like and comment;

- Detail info for each idea with ability to add ingredients to personal shopping list;

- Shopping list with ability to edit and delete ingredients

System administrators should have administrative access to the system and permissions to administer all major information objects in the system:

* to create / edit / delete users,
* to edit/ delete ideas projects

## App Features

There will be main features associated with the app:

* Register and Login(nonregistered users);
* DIY ideas Look-Up and List(nonregistered users) Registered users and admin have additional options – add, edit, delete projects;
* User profile(registered users);
* Create DIY idea project(registered users);
* Edit DIY idea project(only creator and admin);
* Delete DIY idea project(only creator and admin);
* All DIY ideas list with ability to detail view, like and comment(registered users);
* User’s DIY ideas list(registered users);
* Shopping list for ingredients(registered users);
* Admin functionality – users list with ability to add, edit and delete users.

## Operating Environment

Operating environment is as listed below.

* Firebase for back-end
* client/server system
* Operating system: Windows.
* Internet connection

## Requirement Compliance Matrix

View Appendix1.

# Functional Requirements Specification

The following are detailed descriptions of the eight features listed in Section 2.2. As the design component of development cycle progresses, additional details for these features may be added to this SRS. A proper navigation is required.

## 3.0 Navigation

3.0.1 Description and Priority

High Priority – Different tabs are shown depending on user role.

3.0.2 Stimulus/Response Sequences

If user is unregistered or not logged in it shows:

DIY ideas / Ideas / Shopping List Register / Login

If user is logged in it shows:

DIY ideas / Ideas / Shopping List Logout / User

If user is admin it shows:

DIY ideas / Ideas / Shopping List / Admin Logout / User

3.0.3 Functional Requirements

REQ-1: Depending on user role different links are shown.

## 3.1 Register and Secure Login

3.1.1 Description and Priority

High Priority – User can register after entering valid info – username, first name, last name, email, password, imageUrl. This interface will allow the register user to log in to the system.

3.1.2 Stimulus/Response Sequences

The user will enter his/her required information in the appropriate field then active a register button.

The user will enter his/her email and password in the appropriate field then active a login button.

3.1.3 Functional Requirements

REQ-1: The user must have a valid registration to login to access the system.

REQ-2: A failed login will alert the user.

REQ-3/optional/: Three failed login attempts will lock out the user attempting to login, until a reset has been performed by admin.

## 3.2 Ideas Search and List

3.2.1 Description and Priority

High Priority – This is default screen when Ideas tab is clicked. It will provide to user the choice to select an idea from a list or enter a specific search. On screen also has option to add new idea if user is logged in.

3.2.2 Stimulus/Response Sequences

An idea selected from a list of available ideas will prompt that detail information to be loaded.

A search entered into a text field and submitted will prompt that list with information to be loaded.

List shows – idea’s image, name, likes and views with buttons to like and details view.

3.2.3 Functional Requirements

REQ-1: A list of DIY ideas is displayed after Ideas tab is clicked.

REQ-2: A text field is available to enter a specific search.

REQ-3: An error message alerts when no result for search.

REQ-4: Selected idea’s information is loaded.

REQ-5: Return to List is available after view details info.

REQ-6/optional/: Ability to like idea project without viewing it.

## 3.3 Details View Screen

3.3.1 Description and Priority

High Priority – This is the initial view after an idea’s information has been requested or when details info is requested (from ideas list).

3.3.2 Stimulus/Response Sequences

The viewing screen shows name, image, description and list of ingredients. There is a dropdown button “Manage”. If user is project’s author or admin there are visible 2 options – to edit or delete idea, otherwise it has other three - to add ingredients to shopping list, to add comment/optional/ or to add idea to favorite/optional/.

3.3.3 Functional Requirements

REQ-1: Dropdown Navigation with appropriate options.

REQ-2: All info fields are showed name, image, description and list of ingredients. The font will be larger enough for easy reading.

REQ-3/optional/: Add comment button is displayed.

REQ-4/optional/: Add to favorite button is displayed.

## 3.4 Create DIY idea project

3.4.1 Description and Priority

High Priority – This is the default view when add new idea button is clicked.

3.4.2 Stimulus/Response Sequences

Separate fields will allow the user to add project info- name, image URL, description and ability to add ingredients (Add Ingredient button).

When Add Ingredient button is clicked user can add name and amount of ingredient. There is also ability to delete ingredient(x button).

When finish entering data user can save or cancel data.

3.4.3 Functional Requirements

REQ-1: All input fields are showed - name, image URL, description.

REQ-2: Add Ingredient button is displayed.

REQ-3: Save button is displayed.

REQ-4: Cancel button is displayed.

REQ-5: When Add button is clicked , two input fields (for name and amount) and X (delete) button are displayed.

## 3.5 Edit DIY idea project

3.5.1 Description and Priority

High Priority – This is the default view when edit button is clicked.

3.5.2 Stimulus/Response Sequences

Separate fields will allow the user to edit project info.

3.5.3 Functional Requirements

REQ-1: All input fields are showed - name, image URL, description. Project info is filled in edit form.

REQ-2: Add Ingredient button is displayed. All ingredients added to project are shown with ability to edit and delete.

REQ-3: Save button is displayed.

REQ-4: Cancel button is displayed.

REQ-5: When Add button is clicked two input fields (for name and amount) and X (delete) button are displayed.

## 3.6. Delete DIY idea project

3.6.1 Description and Priority

High Priority – This is the default view when delete button is clicked.

3.6.2 Stimulus/Response Sequences

Separate fields with project info are disabled for editing. Delete and Cancel button are shown.

3.6.3 Functional Requirements

REQ-1: Each entry is shown in full and is disabled for editing.

REQ-2: Save button is displayed.

REQ-3: Cancel button is displayed.

## 3.7. User profile

3.7.1 Description and Priority

High Priority – This is the first option in User dropdown list. This is default screen when My Profile button is clicked.

3.7.2 Stimulus/Response Sequences

It shows user’s info with ability to editing. Submit button will allow saving info on server.

3.7.3 Functional Requirements

REQ-1: Each entry is shown in full and is enabled for editing.

REQ-2: Submit button will allow saving info on server.

## 3.8. User’s DIY ideas list - favorite and created

3.8.1 Description and Priority

High Priority – This is the second and third option of User dropdown list and shows all idea projects – favorite or own, depending which option is clicked. This will be a list of user projects.

3.8.2 Stimulus/Response Sequences

Pagination can help user to navigate through list of projects. When click on project section detail info will be shown. If it is own project edit and delete buttons will be shown.

3.7.3 Functional Requirements

REQ-1: A list of DIY ideas is displayed after tab is clicked.

REQ-2: A text field is available to enter a specific search.

REQ-3: An error message alerts when no result for search.

REQ-4: Selected idea’s information is loaded.

REQ-5: Return to List is available after view details info.

REQ-6/optional/: Ability to like idea project without viewing it.

## 3.9. Shopping list

3.9.1 Description and Priority

High Priority – This is the third icon of the Viewing Screen and shows all added ingredients with their amount. There will be an option to add, edit and delete ingredient.

3.9.2 Stimulus/Response Sequences

Two input fields are shown on screen (for name and amount). Buttons for add and clear form are also shown. A real shopping list contains clickable ingredients info with name and amount on it. If user click on ingredients info tab it must fill input form and show update, delete and clear buttons under it.

3.9.3 Functional Requirements

REQ-1: A form with two input fields is shown on the screen.

REQ-2: Add button is displayed.

REQ-3: Clear button is displayed.

REQ-4: Clickable ingredients list is displayed.

REQ-5: When click on ingredient tab, form is filled and Update, Delete and Cancel buttons are displayed.

REQ-6/optional/: Animation added when add or delete item from list.

## 3.10. Admin functionality

3.10.1 Description and Priority

High Priority – This is additional link in Navigation bar visible only if user is Admin. When clicked it shows a list with all users. There will be an option to add, edit and delete user. Page will contain also a search option – by username or email. When user is selected user profile will be shown. Delete button will show confirm screen and set user status to deleted.

3.10.2 Stimulus/Response Sequences

List of all users is shown on screen (with user info – username, email). Buttons for add, edit and delete are also shown. A search input gives ability to search by username or email.

When click on user’s info user profile will be shown with edit and delete button.

3.10.3 Functional Requirements

REQ-1: A list of users is displayed after tab is clicked.

REQ-2: A text field is available to enter a specific search by username or email.

REQ-3: An error message alerts when no result for search.

REQ-4: Selected user’s information is loaded.

REQ-5: When click on user tab, form is filled and Edit, Delete and Cancel buttons are displayed.

# Appendix1 Requirement Compliance Matrix

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements list** | | | |
| **Id** | **Description** | **completed** | **Rem** |
| Web-1 | System Administration Requirements | | |
| Web -1.1 | Administrator should login to do any specific task. | YES |  |
| Web -1.2 | Administrator should be able to add/ modify/ enable/ disable/ delete system users. | YES |  |
| Web -1.3 | Administrator should be able to add/ modify/ archive/ delete projects. | YES |  |
| Web -2 | Nonregistered/public/ user Requirements. | | |
| Web -2.1 | Public user should be able to registered into system | YES |  |
| Web -2.2 | Public user should be able to login into system with valid credentials | YES |  |
| Web -2.3 | Public user should be able to search into system | YES |  |
| Web -2.4 | Public user should be able to view projects list without ability to view, like and comment. | YES |  |
| Web -3 | Registered user Requirements. | | |
| Web -3.1 | User should be able to login into system with valid credentials | YES |  |
| Web -3.2 | User should be able to manage his own profile |  |  |
| Web -3.3 | User should be able to view/add/ edit/ delete his own projects. | YES |  |
| Web -3.4 | User should be able to search into system | YES |  |
| Web -3.5 | User should be able to view projects list with ability to view, like and comment. | YES |  |
| Web -3.6 | User should be able to view detail project with ability to add ingredients to shopping list, like and comment. | Partially – no likes and comments |  |
| Web -3.7 | User should be able to view his own shopping list with ability to add, edit and delete ingredients. | YES |  |
|  | *Completed:* | *Yes (completely implemented)* | |
|  |  | *No (not implemented at all)* | |
|  |  | *Partially (partially implemented, more description under Remarks subsection)* |  |
|  |  | *Unknown (completion status not known)* |  |
|  |  | *Dropped (requirement was dropped during the course of the project)* |  |

# Appendix 2 UI Prototype -todo

# Appendix 3 User interaction diagram

# Appendix 4 Database models

|  |  |  |  |
| --- | --- | --- | --- |
| users | | |  |
|  | type | validation |  |
| uid |  |  |  |
| email | string | email |  |
| *password* | *string* | *min 6 chars* |  |
| imageUrl | string | jpeg|jpg|gif|png |  |
| firstName | string |  |  |
| lastName | string |  |  |
| userName | string |  |  |
| status | string | [online,deleted] |  |
| role | string | [user,admin] |  |
| favorite | array of ids | [idea's ids] |  |
| shoppingList | array of ingredients |  |  |
| \* user email and password is part of Firebase authorization. In users table we use only email and Firebase UID | | | |
|
| projects | | |  |
|  | type | validation |  |
| id |  |  |  |
| authorId | uid |  |  |
| name | string | minLenght 6 chars |  |
| description | string | minLenght 6 chars maxLenght 50 chars |  |
| imageUrl | string | jpeg|jpg|gif|png |  |
| ingredients | array of ingredients |  |  |
| views | number | min 6 chars |  |
| likes | number | min 6 chars |  |
| comments | array of comments |  |  |
|  |  |  |  |
|  |  |  |  |
| models part of idea model | | |  |
|  |  |  |  |
| ingredient | | |  |
|  | type | validation |  |
| name | string |  |  |
| amount | number | positive number |  |
|  |  |  |  |
| comment | | |  |
|  | type | validation |  |
| content | string |  |  |
| authorId | uid |  |  |