Technical Design Roadmapp

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# User Stories

**US1** As a user I want to be able to create and edit a roadmap.

**US2** As a user I want to be able to find tutorials based on keywords I enter.

**US3** As a user I want have the option to choose between multiple resources based on keywords I enter.

**US4** As a user I want to have multiple types of resources based on the keywords I entered.

**US5** As a user I want to be able to track my progress within a roadmap.

**US6** As a user I want to be able to create an account to save a roadmap.

**US7** As a user I want to be able to share my roadmap.

**US8** As a user I want to be able to manage my account.

**US9** As a user I want to be able to see and delete my roadmaps.

**US10** As a user I want to be able to export my roadmap to my Google Calendar.

**US11** As a user I want to be able to save multiple roadmaps.

**US12** As a user I want to receive resource recommendations based on the name of my new roadmap.

**US13** As a user I want to earn achievements based on my level of completion within a roadmap.

# Requirements

## FR-00 - General

**FR-00-1** The system shows a clear error message when something goes wrong.   
**K-00-1.1** The message clearly states what exactly went wrong.

**FR-00-2** The system shows a clear error message when someone inserts wrong input.

## FR-01 - Create & edit roadmap

The relevant User Stories for FR-01 are: **US1**, **US2**, **US3**, **US4**, **US12**

**FR-01-1** A user can create a roadmap.

**B-01-1.1** A user can have up to 10 roadmaps.

**FR-01-2** A user can give the roadmap a name.

**B-01-2.1**  The name of the roadmap has to be at least 4 characters long, and at max consist out of 32 characters.

**B-01-2.2** The name of the roadmap has to be unique within the account.

**K-01-2.1** A user gets resource recommendations based on the name.

**FR-01-3** A user can search for resources.

**K-01-3.1** A user can add up to 5 keywords at a time.

**K-01-3.2** A user is presented with multiple resources.

**K-01-3.3** A user is presented with multiple types of resources.

**K-01-3.4** The system shows a clear error message when no resources are found.

**FR-01-4** A user can add resources to their roadmap.

**B-01-4.1** A user can add up to 25 resources per roadmap.

**B-01-4.2** A resource can only occur once within a roadmap.

**FR-01-5** A user can edit their roadmap.

**K-01-5.1** A user can change the name of the roadmap, restrictions from **FR-01-2** apply.

**K-01-5.2** A user can remove resources from their roadmap.

**K-01-5.3** A user can search for resources for their roadmap, restrictions from **FR-01-3** apply.

**K-01-5.4** A user can add resources to their roadmap, restrictions from **FR-01-4** apply.

## FR-02 - Roadmap management

The relevant User Stories for FR-02 are: **US5**, **US7**, **US9**, **US10**, **US11**, **US13**

**FR-02-1** A user has an overview of their roadmaps.

**K-02-1.1** A user can see their progress per roadmap.

**FR-02-2** A user can see the resources within the roadmap.

**FR-02-3** A user can save their roadmap.

**B-02-3.1** A user can save up to 10 roadmaps.

**FR-02-4** A user can share their roadmap.

**K-02-4.1** A user can share their roadmap with a hyperlink.

**FR-02-5** A user can export their roadmap to their Google Calendar.

**K-02-5.1** The user exports a task list.

**FR-02-6** A user can delete their roadmaps and all relevant data.

**K-02-6.1** The user is asked to confirm their action.

**FR-02-7** A user can achieve achievements.

## FR-03 - Account management

The relevant User Stories for FR-03 are: **US6**, **US8**

**FR-03-1** A user can create an account  
**B-03-1.1** The username has to be unique  
**B-03-1.2** The username can’t take up more than 16 characters  
**B-03-1.3** The password has to be at least 6 characters long, and at max consist out of 16 characters.  
**B-03-1.4** The password has to contain at least one digit.  
**K-03-1.1** The user is logged in after they create an account.

**FR-03-2** A user can log in with their account  
**K-03-2.1** The system shows a clear error message when the combination of username and password does not exist.

**FR-03-3** The user can log out.  
**K-03-3.1** The system redirects the user to the login/register page after the user is logged out.

**FR-03-4** The user can delete their account and all its data.  
**K-03-4.1** The system asks the user for their password and if they are sure they want to delete their account.   
**K-03-4.2** The system shows a clear error message when the password is wrong.  
**K-03-4.3** The system shows a clear message when the account is deleted properly.

**K-03-4.4** The user is redirected to the registration/login page after an account is deleted.

**FR-03-5** The user can change their password.  
**B-03-5.1** The new password has to be between 6 and 16 characters.  
**B-03-5.2** The new password has to contain at least one digit.  
**B-03-5.3** The new password cannot be the same as the old password.

**FR-03-6** The user has an overview of their account.

# MoSCoW

## Must haves

* **FR-01-1** A user can create a roadmap.
* **FR-01-2** A user can give the roadmap a name.
* **FR-01-3** A user can search for resources.
* **FR-01-4** A user can add resources to their roadmap.
* **FR-02-1** A user has an overview of their roadmaps.
* **FR-02-2** A user can see the resources within the roadmap.
* **FR-02-3** A user can save their roadmap.

## Should haves

* **FR-01-5** A user can edit their roadmap.
* **FR-02-5** A user can export their roadmap to their Google Calendar.
* **FR-02-6** A user can delete their roadmaps and all relevant data.
* **FR-02-7** A user can achieve achievements.

## Could haves

* **FR-02-4** A user can share their roadmap.
* **FR-03-1** A user can create an account
* **FR-03-2** A user can log in with their account
* **FR-03-3** The user can log out.
* **FR-03-4** The user can delete their account and all its data.
* **FR-03-5** The user can change their password.
* **FR-03-6** The user has an overview of their account.

# Use Cases

|  |  |
| --- | --- |
| *Name* | UC-01-1: Creating a roadmap (FR-01-1, FR-01-2, FR-02-3) |
| *Summary* | The user creates a roadmap. (**FR-01-1**) |
| *Actors* | User |
| *Assumptions* | The user has a working account and is logged in. |
| *Scenario* | 1. The user opts to create a new roadmap. 2. The system displays a form for a new roadmap. 3. The user enters a name for the new roadmap. (**FR-01-2**) 4. The system displays resource recommendations. (**K-01-2.1**) 5. The user can add any amount of recommended resources to the roadmap. 6. The system shows the updated list of resources. 7. The user opts to save the roadmap. (**FR-02-3**) 8. The system saves the roadmap. |
| *Exceptions* | * 1. The system displays an error message when the user already has 10 roadmaps. (**B-01-1.1, B-02-3.1**)   3.1. The system displays an error message when the name is either too long or too short. (**B-01-2.1**)  3.2. The system displays an error message when the name is not unique. (**B-01-2.2**)  4.1. The system displays an instructional message when no recommendation are found. |
| *Result* | The user has created and saved a new roadmap. |

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| --- | --- |
| *Name* | UC-01-2: Adding resources (FR-01-3, FR-01-4, FR-02-3) |
| *Summary* | The user adds resources to a roadmap. (**FR-01-1**) |
| *Actors* | User |
| *Assumptions* | The user has a working account and is logged in.  The user has opted to edit or create a roadmap. |
| *Scenario* | 1. The user searches for up to 5 keywords. (**FR-01-3, K-01-3.1**) 2. The system shows a list of result with a variety of types. (**K-01-3.2, K-01-3.3**) 3. The user adds one or more resource(s). (**FR-01-4**) 4. The system shows the updated list of resources. 5. The user opts to save the roadmap. (**FR-02-3**) 6. The system saves the roadmap. |
| *Exceptions* | 2.1. The system displays an instructional message when no results are found. (**K-01-3.4**)  3.1. The system displays an error message when the resource limit is exceeded. (**B-01-4.1**)  3.2. The system displays an error message when the resource is already in the roadmap. (**B-01-4.2**) |
| *Result* | The user added resources to a roadmap and saved it. |

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| --- | --- |
| *Name* | UC-02-1: Roadmaps overview (FR-02-1) |
| *Summary* | The user has an overview of their roadmaps and their corresponding progress. (**FR-02-1, FR-02-2**) |
| *Actors* | User |
| *Assumptions* | The user has a working account and is logged in.  The user has at least one roadmap. |
| *Scenario* | 1. The user navigates to their roadmap overview 2. The system displays all the user’s roadmaps and their progress within them. (**K-02-1.1**) |
| *Exceptions* | - |
| *Result* | The user has an overview of their roadmaps and their corresponding progress. |

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| --- | --- |
| *Name* | UC-02-1: Roadmap overview (FR-02-2) |
| *Summary* | The user has an overview of one roadmap and their completion progress. (**FR-02-2**) |
| *Actors* | User |
| *Assumptions* | The user has a working account and is logged in.  The user has at least one roadmap.  The user has a roadmap selected. |
| *Scenario* | 1. The user navigates to their home page. 2. The system displays the resources and their completion and the progress within the roadmap. |
| *Exceptions* | - |
| *Result* | The user has an overview of on roadmap and their completion progress. |

# Domainmodel

Diagram

Description automatically generated