KAUNO TECHNOLOGIJOS UNIVERSITETAS

INFORMATIKOS FAKULTETAS

T120B162 Programų sistemų testavimas

IFF-6/11 Nerijus Dulkė

Data: 2019.10.07

KAUNAS
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Software description

Selected software is a roadmaping and planning tool. This tool allows users to easily plan and different activieties, plans for selected period of time.

Architecture:

This tool is a web app that has separate frontend and backend. Frontend is written in JavaScript and uses Vue.js framework while backend is written in TypeScript and uses Express.js framework.

Features:

Currently project consists of these features – roadmap management, creating and editing categories and task for these roadmaps.
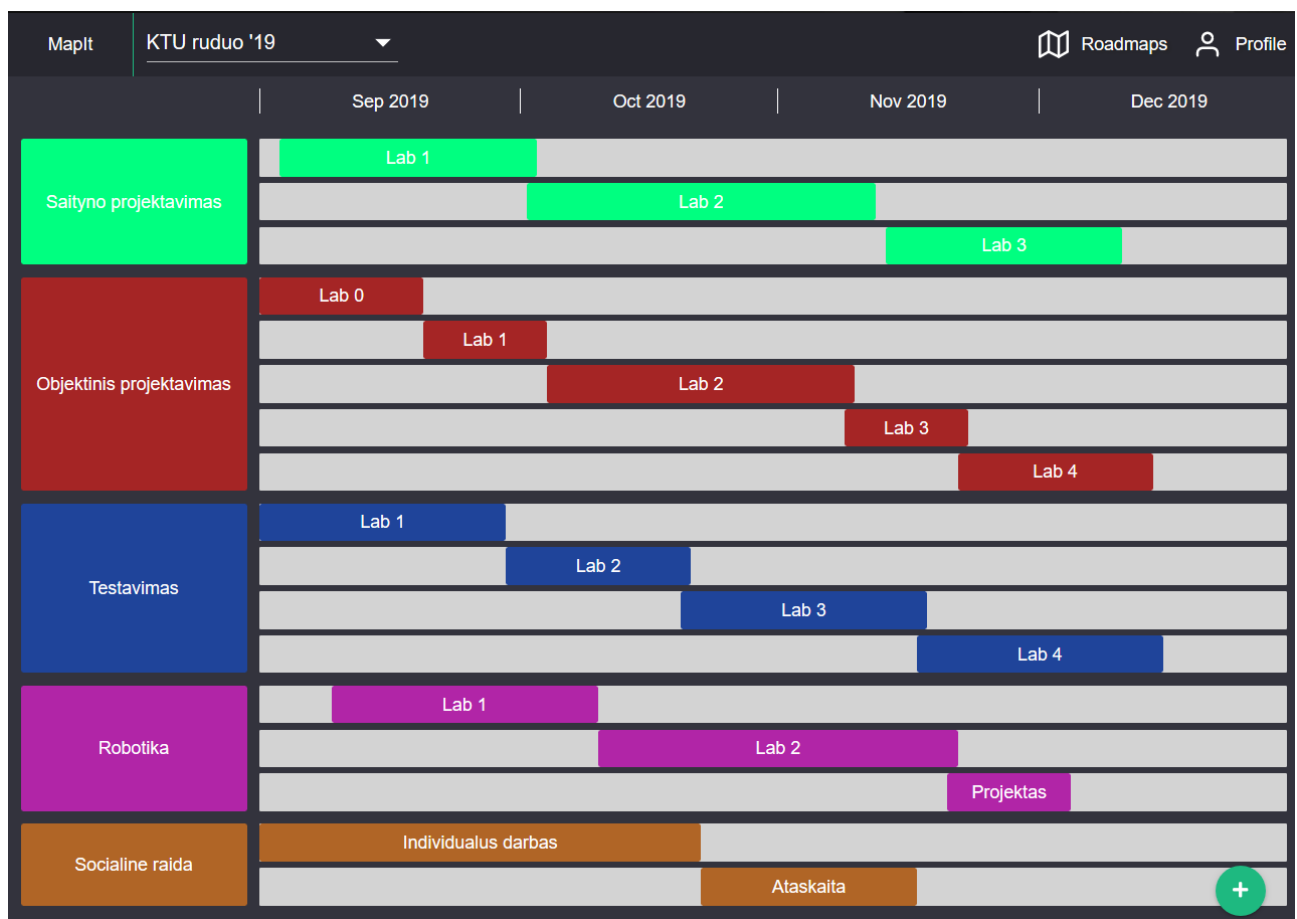

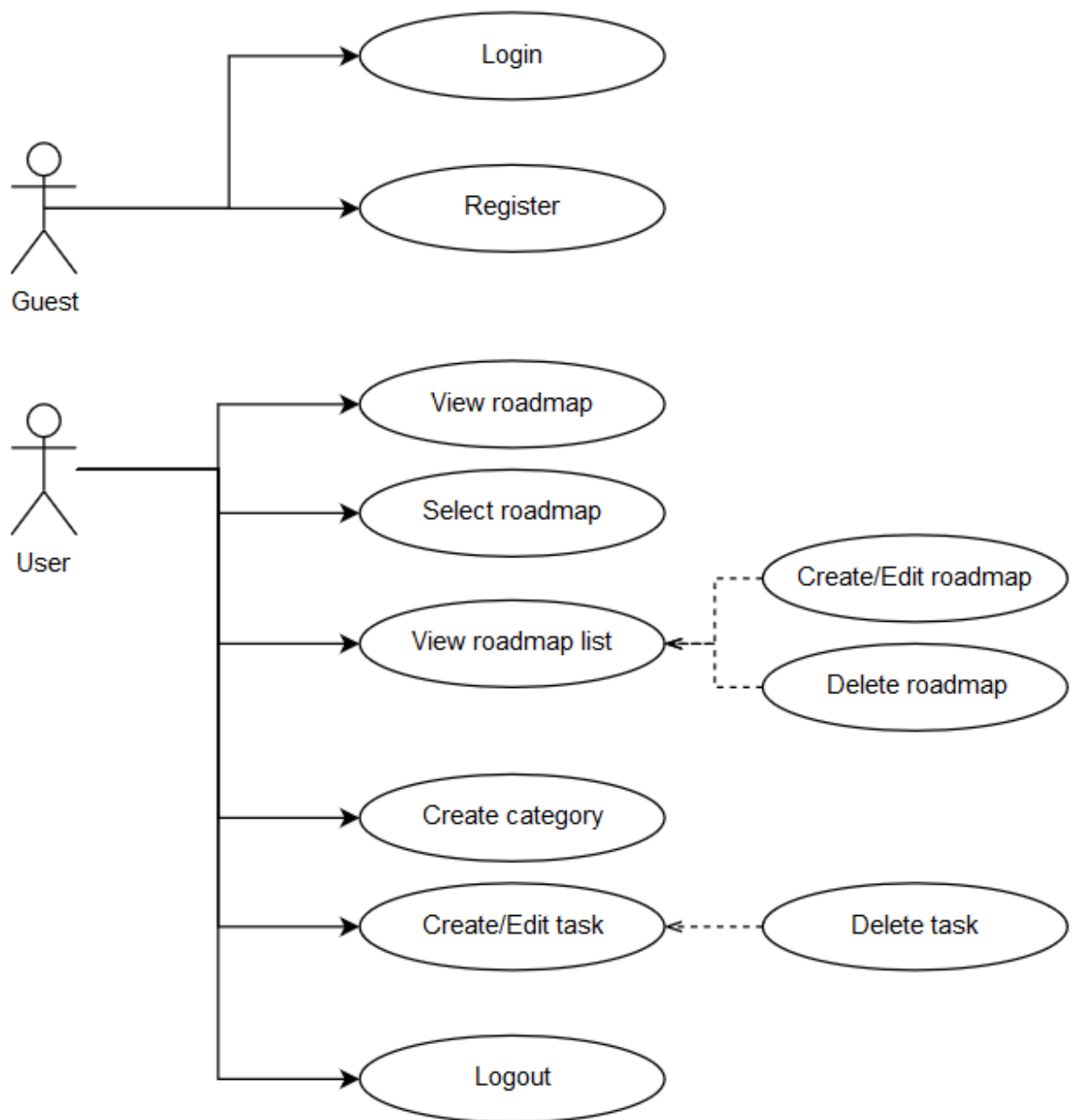**Figure 1 Screenshot from the app**

Figure 2 Use case diagram

Test plan

Test Strategies

Frontend will be covered in unit tests (using Jest framework), while backend API will be covered in end-to-end tests (using Mocha and Supertest frameworks). ESLint and TSLint will be used for static code analysis.

Pre-requisites

- Setup Node.js environment

Test priorities

- Check if new code doesn't break existing tests
- Check if newly implemented features work as intended
- Cover new functionality with unit or end-to-end tests

Test techniques

The following testing techniques will be used:

- Tests scripts – the scripted uses cases (with predefined input and expected output data).
- Test scripts without data – the testers will choose the input data during testing.
- Unauthorized use tests – the scripted activities that try to gain access to the unauthorized data in the software.
- Usability checklist – activities to evaluate systems the ease of use.
- Performance statistics – performance characteristics collection and comparison with defined parameters.

Results

After testing the following deliverables should be available:

- Test plan – this document with all changes made during testing process.
- Change requests – document describing software changes caused by changed requirements or discovered defects during testing.

Test scripts

Test Script 1. Roadmap management

Description: select, delete and create roadmaps

Initial data: initial database, logged in with User1

Test steps: Navigate to roadmap list, select roadmap

Test cases:

Data created	Action	Expected result	Comment
Roadmap	Select roadmap	Should return the created roadmap	
Roadmap with another user assigned	Select roadmap	Should return authorization error	
-	Select non-existing roadmap	Should return 'Not Found' error	
Roadmap	Delete roadmap	Should delete roadmap from database	
Roadmap with another user assigned	Delete roadmap	Should return authorization error	
-	Create roadmap with correct data: Title: "TestTitle" Start date: 2019-10-01 End date: 2019-12-31	Should insert new roadmap into database	
-	Create roadmap with no dates: Title: "TestTitle" Description: "Test description"	Should not create new roadmap and return validation error	Start and end dates are required

Test Script 2. Task management

Description: Should correctly display tasks in roadmap

Initial data: initial database, logged in with User1

Test steps: Navigate to roadmap view

Test cases:

Data created	Action	Expected result	Comment
Roadmap with dates: Start date: 2019-09-01 End date: 2019-12-31 Category with color green. Task with dates: Start date: 2019-10-01 End date: 2019-10-31	Open roadmap view	Task should be correctly displayed in green color and last through all October.	
Roadmap with dates: Start date: 2019-09-01 End date: 2020-01-31 Category with color green. Task with dates: Start date: 2019-12-15 End date: 2020-01-15	Open roadmap view	Task should be correctly displayed in green color lasting through second half of December and first half of January.	Should not be any anomalies when year changes.
Roadmap with dates: Start date: 2019-09-01 End date: 2019-12-31	Create a task with end date - 2020-01-15	Should return validation error	Task dates can't be later than roadmap end date
Roadmap with dates: Start date: 2019-09-01 End date: 2019-12-31	Create a task with start date – 2018-01-31	Should return validation error	Task dates can't be earlier than roadmap start date

Test Scripts 2. Login

Description: authenticates user

Initial data: initial database with User1 created

Test steps: navigate to login page, input data

Test cases:

Data entered	Expected result	Comment
Input correct email and password: Email: "user1@test.com" Password: "Test123"	Should login	
Input correct password but incorrect email: Email: "user2@test.com" Password: "Test123"	Should not login	
Input correct email but incorrect password: Email: "user1@test.com" Password: "Test12345"	Should not login	

Test Scripts 3. Register

Description: creating user account

Initial data: initial data with User1 created

Test steps: navigate to registration page, input data

Test cases:

Data entered	Expected result	Comment
Input correct data: Email: "user2@test.com" Name: "User2" Password: "Test123"	Should create new account	
Input already existing email: Email: "user1@test.com" Name: "User2" Password: "Test123"	Should return validation error	
Input invalid data in all fields: Email: "user2testcom" Name: "" Password: "test"	Should return error messages for all fields	