# USER'S MANUAL

*Mobility requirements tool for mobile apps*

Jan, 2016

## Revision Sheet

| Release No. | Date | Revision Description |
|---|---|---|
| Rev. 0.1 | 16.01.2016 | First version release |
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# USER'S MANUAL

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# 1.0 GENERAL INFORMATION

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## 1.1 System Overview

The name of the system is “Mobility requirements tool for mobile apps(MRTM)”. Its purpose is to be used by mobile app design teams for mobility requirements analysis for mobile apps. It was part of a Phd. research done by Xiaozhou Li under supervision of Dr. Zheying Zhang. The mobile requirements analysis process used to implement this system is published in the paper “A User-App Interaction Reference Model for Mobility Requirements Analysis” published by Xiaozhou Li and Zheying Zhang.

Mobility is a key characteristics of mobile apps that allows users to access features and services anywhere and anytime. For the mobile app to achieve mobility it should provide features that are suitable to use in different contexts. This tool provides a mobile requirements analysis process that analyses the different contexts and ways of interaction between users and apps. The tool enables to identify conflict between the ideal way of interaction and the way the features are designed to be used.

The tool allows to create projects and add users(analysts) that collaborate on the analysis process. The project owner adds requirements and the natural way of interaction for each of the requirements. The rest of the team members (analysts) vote by rating contexts for each of the created requirements. The system compares the designed way of interaction with the ideal way of interaction for each of the contexts to identify conflicts. The project owner resolves the conflict by eliciting requirements that enhance the mobility of the mobile app. The system have different user roles such as Admin, project manager and analysts with different level of access and permission levels.

The system is a web-based application and it uses the client/server architecture. The application should be hosted on a web-server and the user access it using a browser. In addition, the application requires a MySQL database to store data. The system is free and open source software(FOSS) and its hosted on a public git-hub account.

## 1.2 Points of Contact


- Xiaozhou Li
  - Project owner
  - Email - lixiaozhou725@gmail.com
- Dr. Zheying Zhang
  - Project owner
  - Email - Zheying.Zhang@uta.fi


## 1.3 Organization of the Manual

This user manual is intended to be used as general introduction to the system and getting-started manual. In section 2, an overview of the system configuration and user access levels are described briefly. getting-started guide is presented in section 3. It describes the main menus of the system and their functionalities. Its main purpose is to introduce the user with user interface of the system and the main functionalities. Finally, section 4 describes the different functionalities of the system in detailed steps and illustrations.

# 2.0 SYSTEM SUMMARY

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The system developed is a web application. In order to use the system, a web server , web browser and Internet connection are required. The system have different users and each of them have different permissions. The Administrator have overall responsibility of managing and maintaining the application and all users. The project manager adds requirements and users to a project he owns. Analysts vote on situational contexts for each requirement of a project.

## 2.1 System Configuration

The following hardware, software and communication are required to configure and use the system.

- Web server - Its a computer on which the web server is installed. This is typically a powerful computer that can handle many requests from different clients.
- Web application - the system that is developed in this project and it will be hosted on the web server
- Browser - on the user computer a web browser needs to be installed which is used to access the application.
- Internet - the user computer should be connected to the Internet
- Database server - A database server is used to store the data.

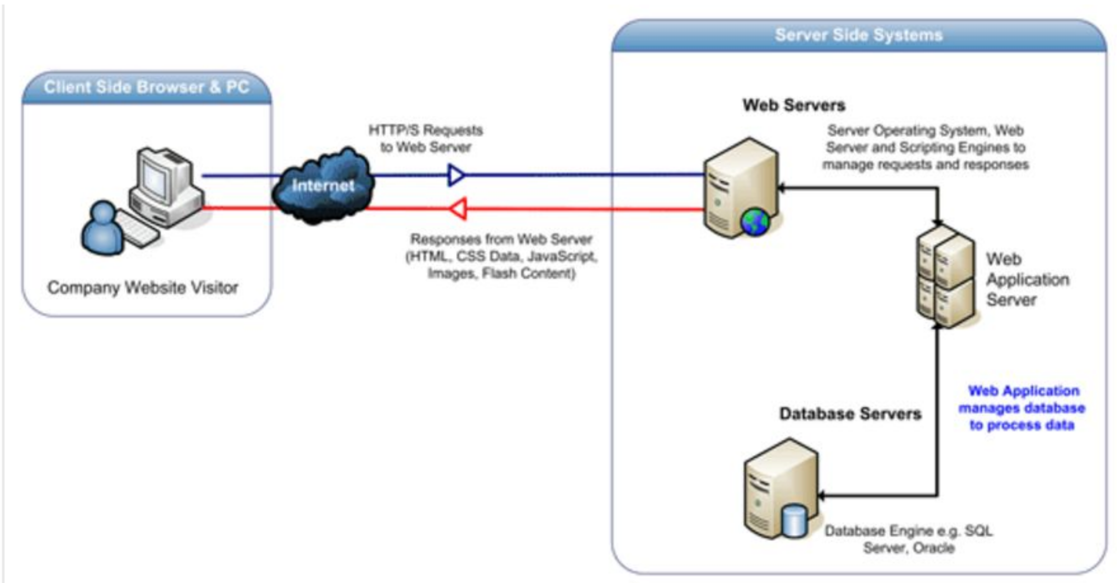


Figure 2.1 how web application work.

## 2.2 User Access Levels

This section describes the different users and/or user groups and the restrictions placed on system accessibility or use for each.

| User | Description | Permissions |
|---|---|---|
| *Administrator* | The person in charge of overall management and maintenance of the system | • creates all user accounts and can also edit and delete user accounts<br>• Can also do other tasks done by a *project manager* and *analyst* |
| *Project manager* | owner of a project | • creates a project<br>• adds users(Analysts) to a project<br>• Add requirements to a project |

| | | |
|---|---|---|
| | | • Determine the way of interaction for a requirement |
| *Analyst* | works on a project he/she is a member | • vote on the contexts of a requirement |

# 3.0 GETTING STARTED

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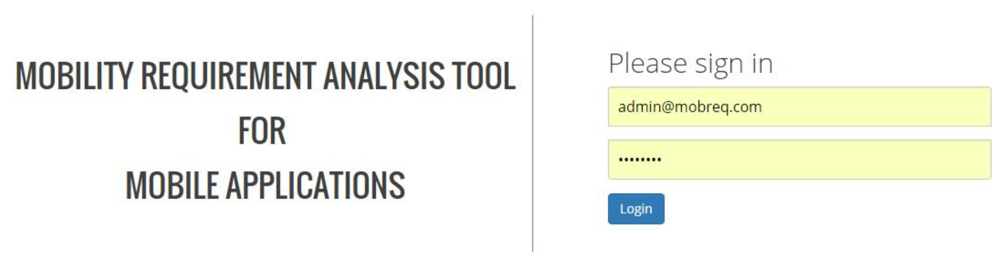
The application is divided into three major modules:
- Log-in Module
- User management module
- Project Management module

## 3.1 Logging On

The access to the application is secured by a user ID and a password. Email is treated as used Id in the application. A user can log in to the application in two different roles - as a Project manager and as a normal team member. Getting a user id and a access password is different for different roles. There is no registration module for the application, so user ID and password are provided to users by different ways

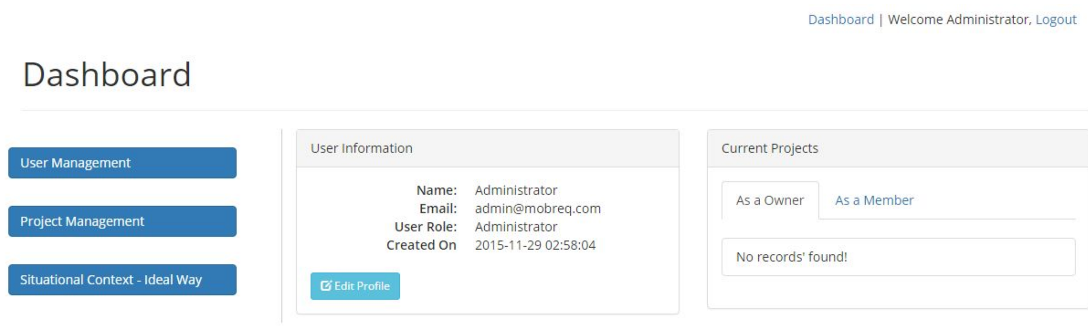
- Project manager: When the system is installed at a system it comes with a default user id and password. This password can be used by a system admin to generate as many Project manager log in credentials as possible using Email of the respective project managers. The Project Managers can change their user name and password by visiting the User management module of the application.

- Normal Team members: The team members role consist of roles such as designer, developer etc. The user credentials for them are generated by their project's respective project manager. They can edit their credentials by visiting the user management module.



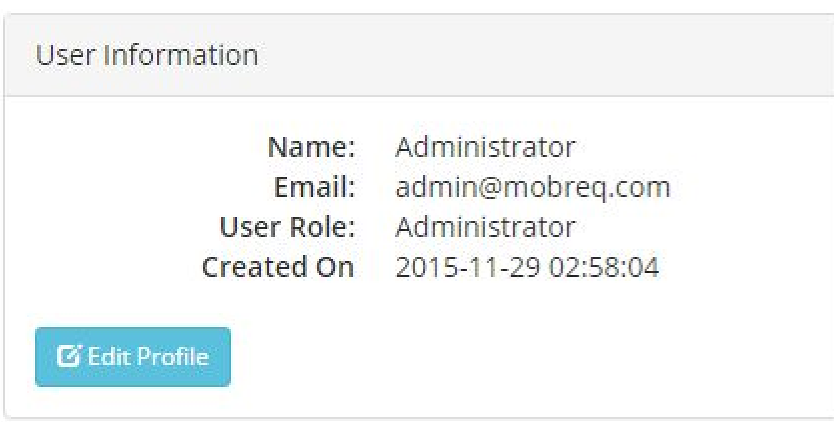

## 3.2 User Dashboard

After the user logs in to the system, he is greeted by the dashboard page or the main page of the application. This page acts as an interface to access other contents of the application. The features that can be accessed by the dashboard are described below in detail and can be seen in the image:



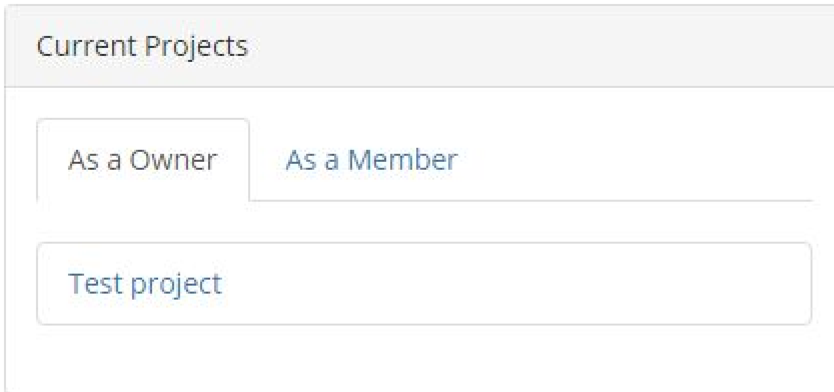

### 3.2.1 User Information

This can be seen on the dashboard. It contains the basic info of the user name, email, user role and the date when it was created. There is a button to edit the profile, which can be used to change the user id and password.




### 3.2.2 Current Projects

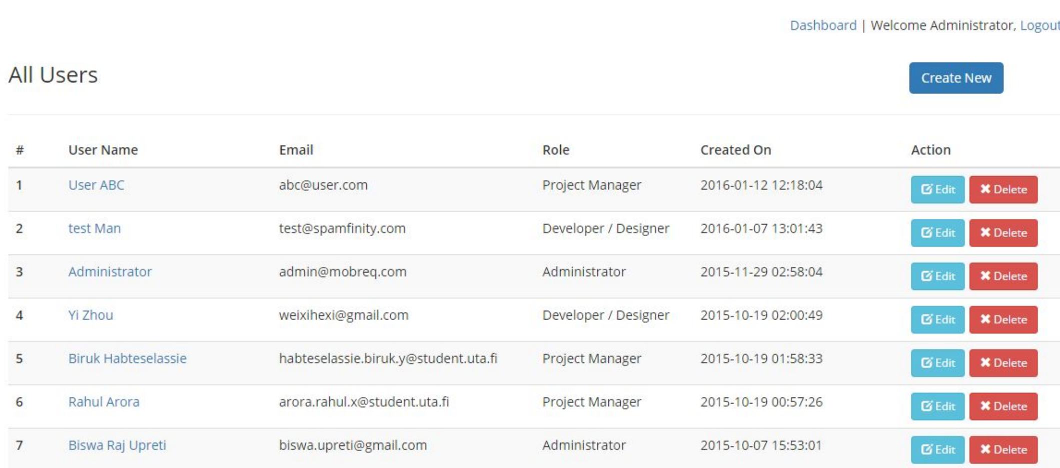
This part is present in the dashboard and it represents the current projects the user is currently part of. It filters those projects in terms of roles - As a member and as a Owner/ Project Manager.




### 3.2.3 User management

This section of the application is only available to the administrator of the application. Using this feature, the admin can provide access to new users or deny access to existing ones by deleting them from the application.

- The admin can create a new user and give role of admin, project manger or other team member for that user.
- The admin can edit name, email, change password and change roles of the existing user. The admin can also delete the user.

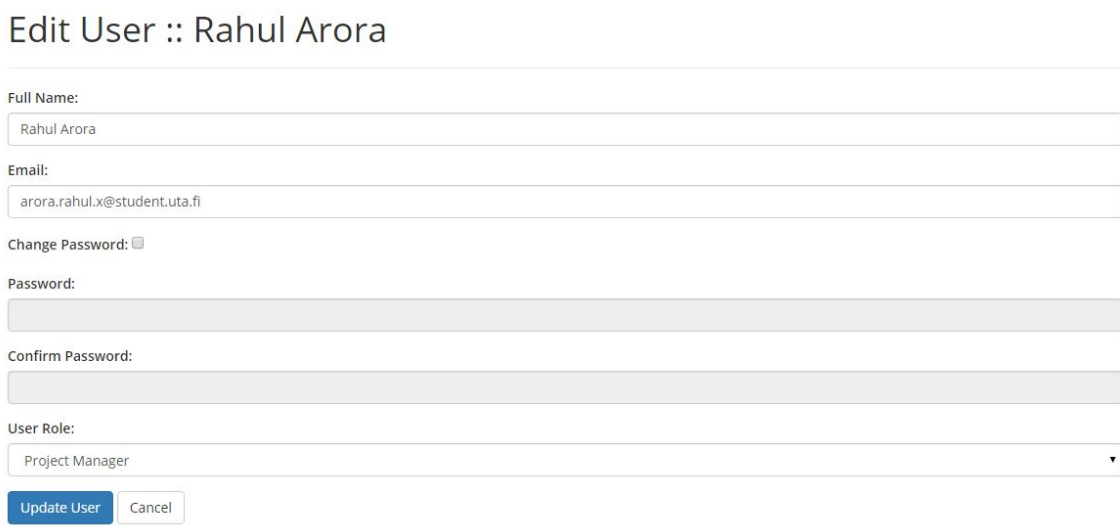


Dashboard | Welcome Administrator, Logout

All Users — Create New

| # | User Name | Email | Role | Created On | Action |
|---|---|---|---|---|---|
| 1 | User ABC | abc@user.com | Project Manager | 2016-01-12 12:18:04 | Edit Delete |
| 2 | test Man | test@spamfinity.com | Developer / Designer | 2016-01-07 13:01:43 | Edit Delete |
| 3 | Administrator | admin@mobreq.com | Administrator | 2015-11-29 02:58:04 | Edit Delete |
| 4 | Yi Zhou | weixihexi@gmail.com | Developer / Designer | 2015-10-19 02:00:49 | Edit Delete |
| 5 | Biruk Habteselassie | habteselassie.biruk.y@student.uta.fi | Project Manager | 2015-10-19 01:58:33 | Edit Delete |
| 6 | Rahul Arora | arora.rahul.x@student.uta.fi | Project Manager | 2015-10-19 00:57:26 | Edit Delete |
| 7 | Biswa Raj Upreti | biswa.upreti@gmail.com | Administrator | 2015-10-07 15:53:01 | Edit Delete |

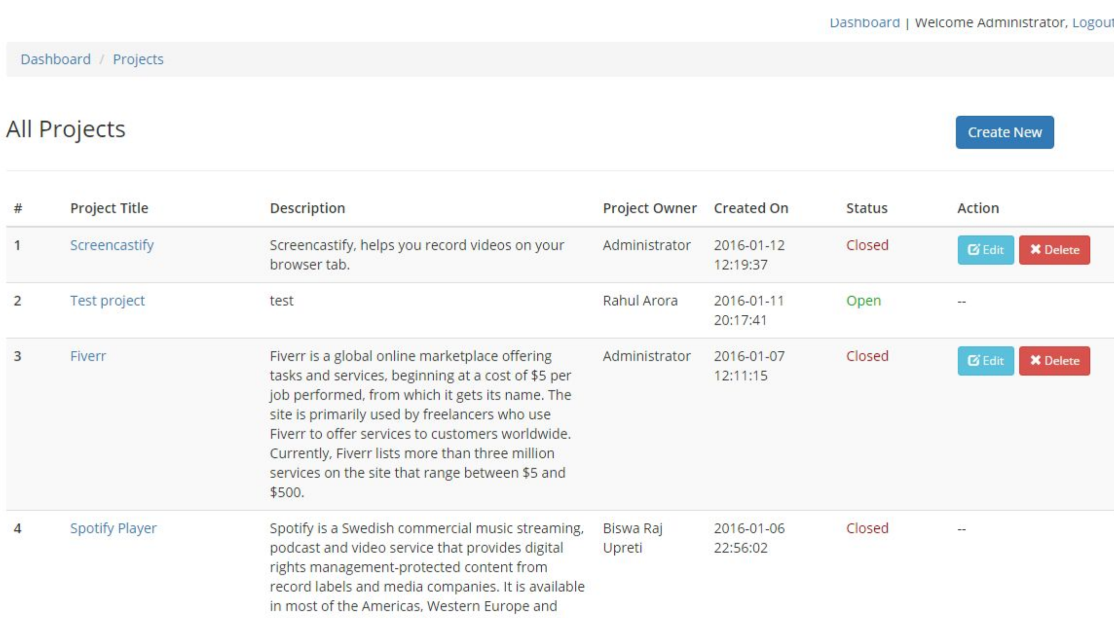
*View all the users using the application*



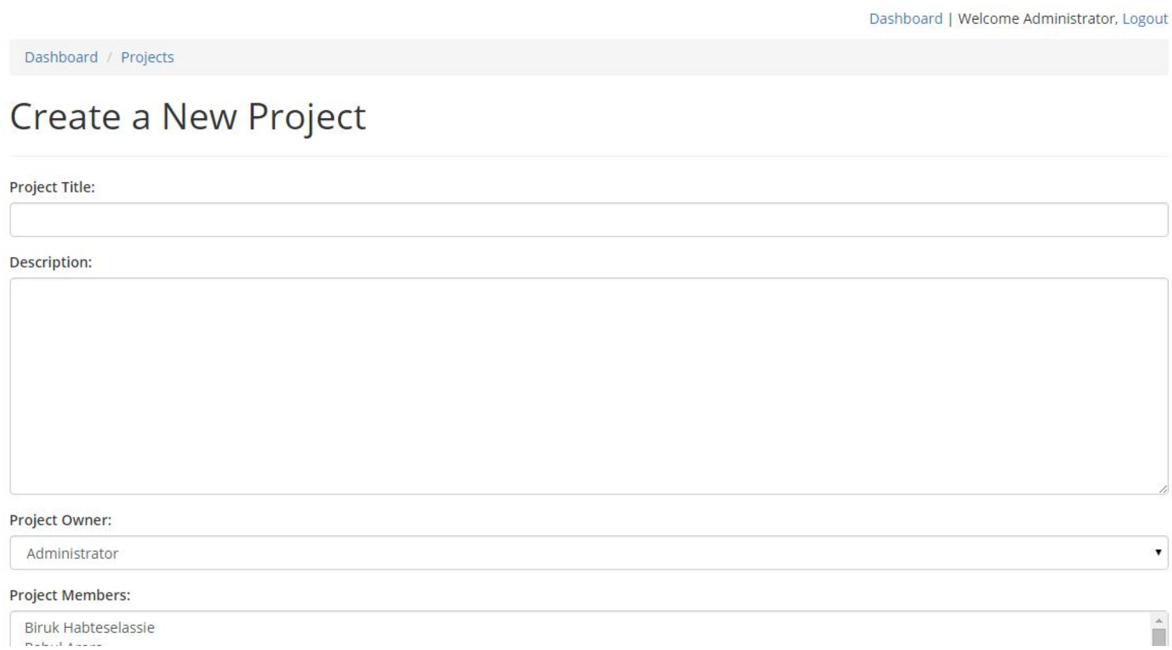

*Edit a user*

### 3.2.4 Project management

This section showcases the projects that were created in the application. This section is only accessible to the project manager or admin of the application, other team member do not have access to this area. Each project's info contains its title, description, project owner, when it was created and the current status of the Project- Closed or Open. New projects can be created and the existing ones can be edited and deleted in this section.




*Projects listed in Project Management section*




*Create a new project page*

### 3.2.5 Situational context - ideal way

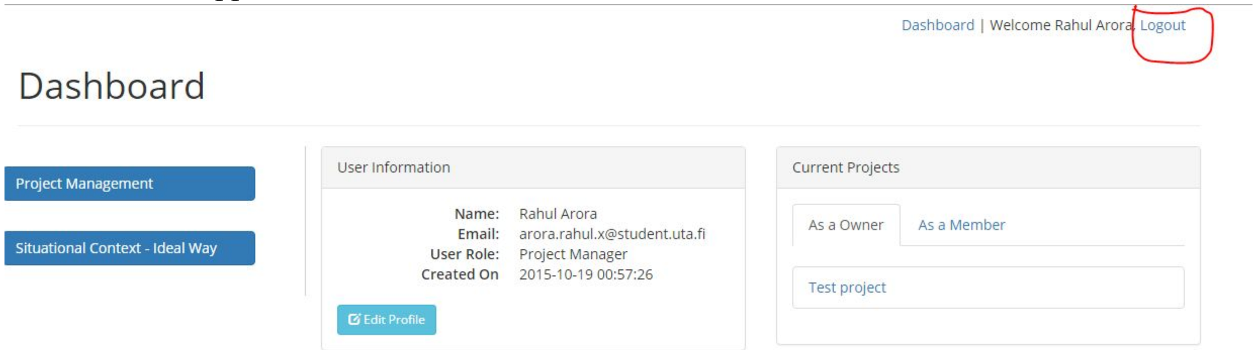
This section lists the ideal ways of interaction for different situational contexts. The way of interaction stated by the project owner for each requirement is compared with this ideal ways of interaction. If there is a conflict the system identifies it and it is resolved by enhancing the requirement to support better mobility.

Ideal Way of Interaction for Situational Context

| # | Situational Context | Typical Scenario | Ideal Ways of Interaction |
|---|---|---|---|
| 1 | VCI | In a conference giving presentation | Accompanying; |
| 2 | VCA | In a lecture listening | Intermittent; |
| 3 | VEI | In a cafe working on assignments with close deadline | Accompanying; Intermittent; |
| 4 | VEA | At home idle | Interrupting; |
| 5 | TCI | In a car driving with time limit | Accompanying; |
| 6 | TCA | In a car driving and sight seeing | Accompanying; Intermittent; |
| 7 | TEI | In a train when it is about to arrive at the destination | Accompanying; Intermittent; |
| 8 | TEA | In a train idle | Accompanying; Interrupting; |
| 9 | WCI | Running in a race | Accompanying; |
| 10 | WCA | Wondering in a cocktail party as a host | Intermittent; |
| 11 | WEI | Running to catch a bus | Accompanying; |
| 12 | WEA | Walking in a park relaxing | Accompanying; Intermittent; |

## 3.3 Exit System

To exit the system, the user needs to click on the 'Logout' hyperlink that can be found in the top most bar of the application.



# 4.0 USING THE SYSTEM

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## 4.1 User Management

The user management module provides functionalities to create new users and manage existing users. The functionalities includes user registration, view existing users , edit and delete user accounts. Only the *Administrator* have access to the user management module.

### 4.2.1 User View

The list of projects is displayed the info includes user name, Email, role, created on and action. Next to each user list there is *Edit* and *Delete* buttons.

Steps:

- Select *user management* on the user dashboard(see Fig. 4.2)
- The list of users is displayed
- There are *Edit* and *Delete* buttons next to each user

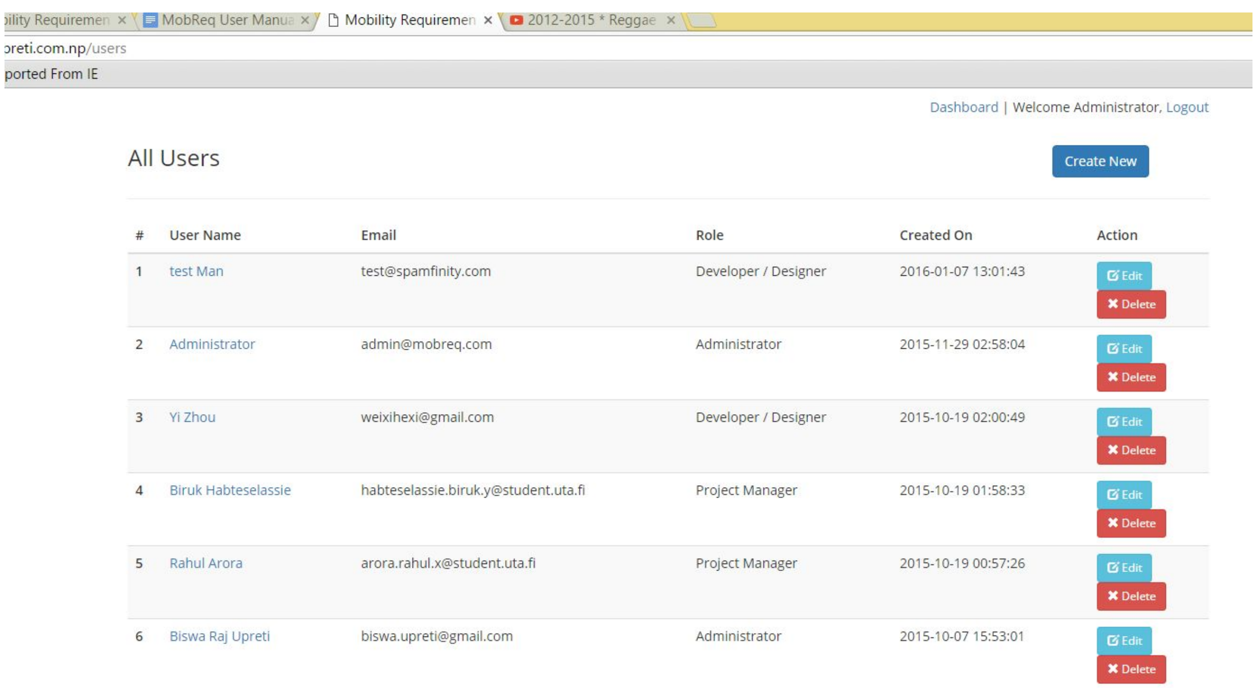


Figure 4.2.1 List of users.

### 4.2.1 User registration

The Admin can create a new user.

Steps :

- Click *Create New* button (see fig. 4.2.1)
- On the user registration form Enter necessary info
- click *Add user* button

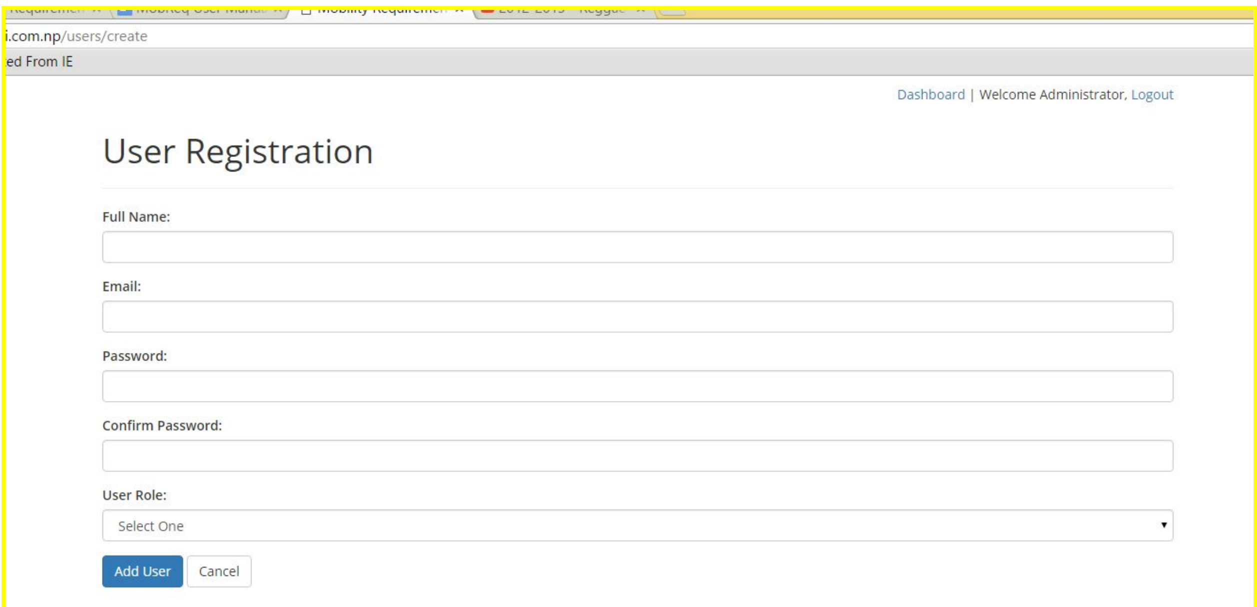


Figure 4.2.1 User registration form.

### 4.2.2 Edit user

The Administrator can edit a user account info.

Steps :

- Select *user management* on the dashboard(see Figure 4.2)
- the list of users is displayed
- Select *Edit* button

- Edit user info by updating the desired fields
- Select *update user*

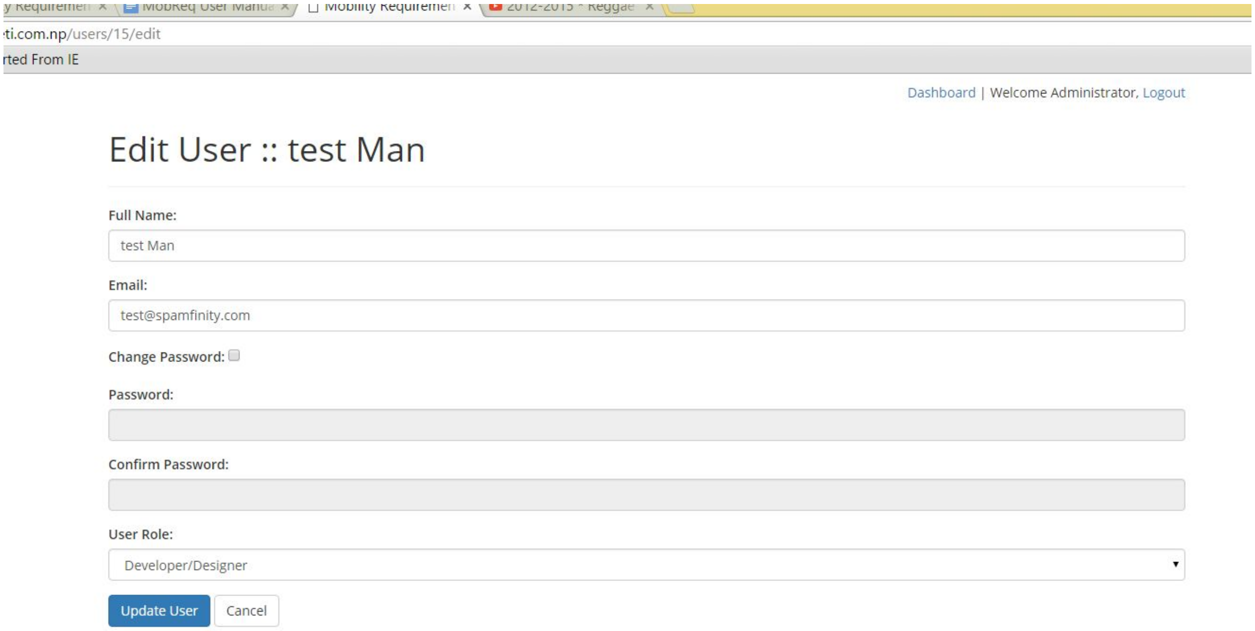


Figure 4.2.2 Edit use profile.

### 4.2.2 Delete user

The Admin can delete a user.

Steps :

- Select *user management* on the dashboard(see Figure 4.2)
- Select the *Delete* button
- The system asks for confirmation
- select OK to delete or Cancel to reject the delete

## 4.2 Project Management

The project management module provides functionalities to create a new project and manage existing projects. The *project owner* creates a new project and adds *analysts to* the project. Moreover, the project owner can *edit* and *delete* projects he owns.

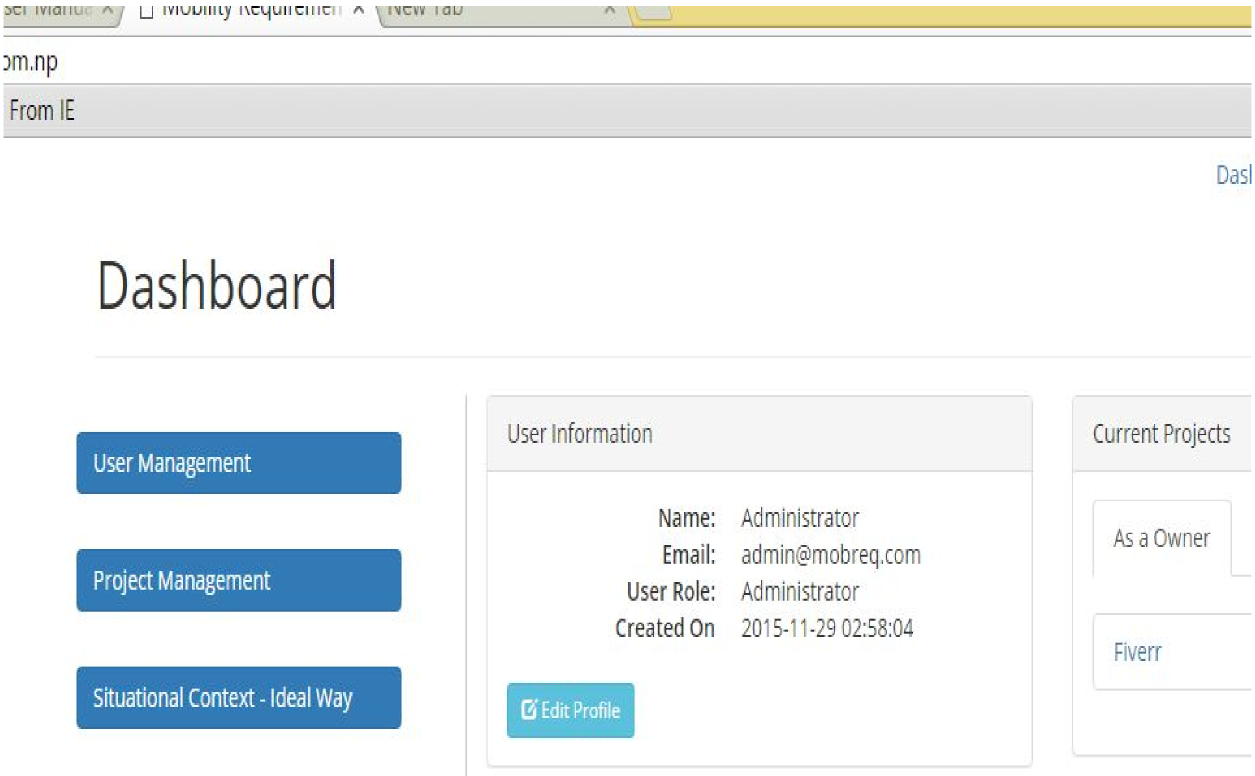


Figure 4.2 *The project management menu on the user dashboard.*

### 4.2.1 Project View

Displays list of projects for the logged in user. The administrator can see all projects. However, for other users they can only see projects they own . The list includes project info such as project tittle, description, project owner, date created and, status. The status is either *open* or *closed,* open means the project is still open for voting and closed is the project is no longer available for voting.

Steps:

- Select project management on the user dashboard(see Fig. 4.2)
- The list of projects is displayed
- There are *Edit* and *Delete* buttons next to each project the user own

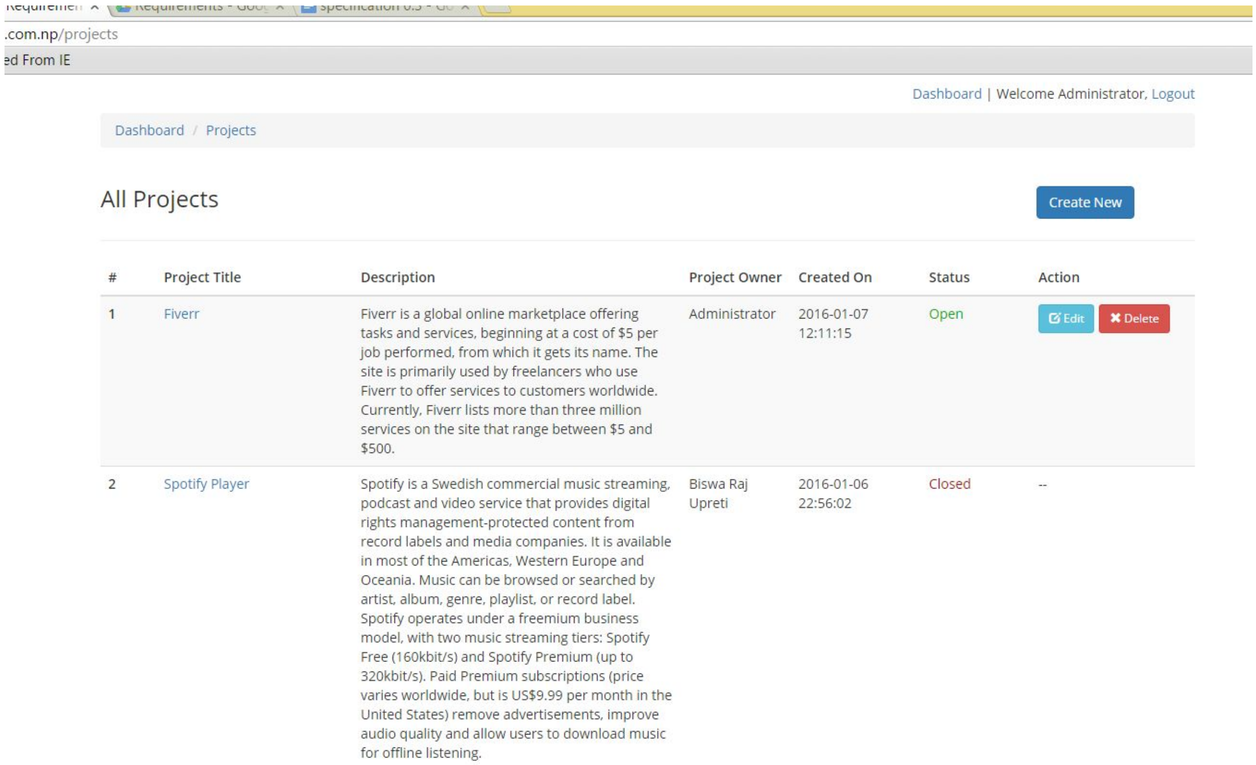


Figure 4.2.1 List of projects for the Admin user.

### 4.2.2 Create a new project

The Administrator or project manager can create a new project.

Steps

- Click *Create New* button (see fig. 4.2.1)
- On the form Enter *project Title*
- Enter *Description*
- Select *Project owner*
- Select *project members*
- select *status* (for new project it should be open)
- click *Add Project* button

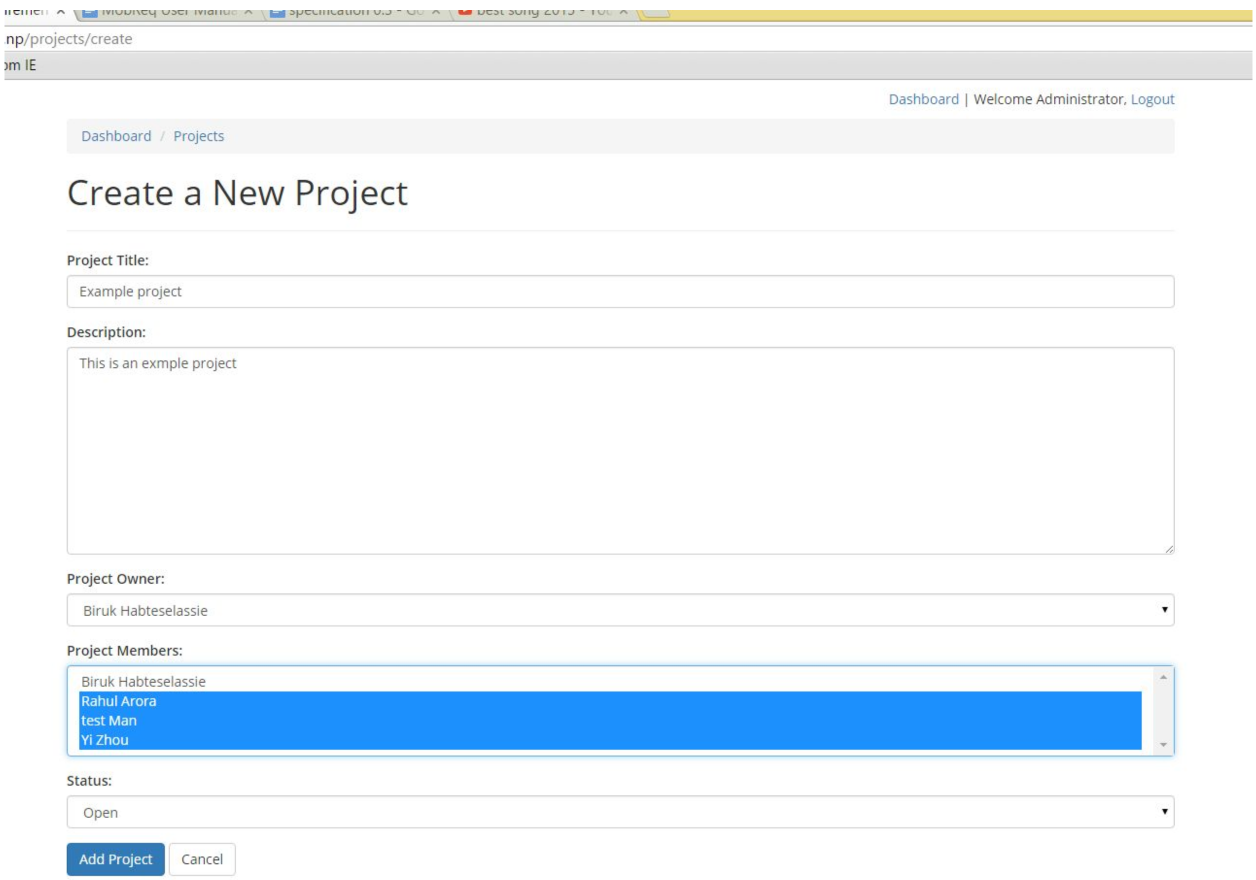


Figure 4.2.2 Create new project.

### 4.2.2 Edit a project

The owner of a project can edit a project.

Steps :

- Select *project management* on the dashboard(see Figure 4.2)
- the list of projects is displayed
- Select *Edit* button
- Edit project info by updating the desired fields
- Select *update project*

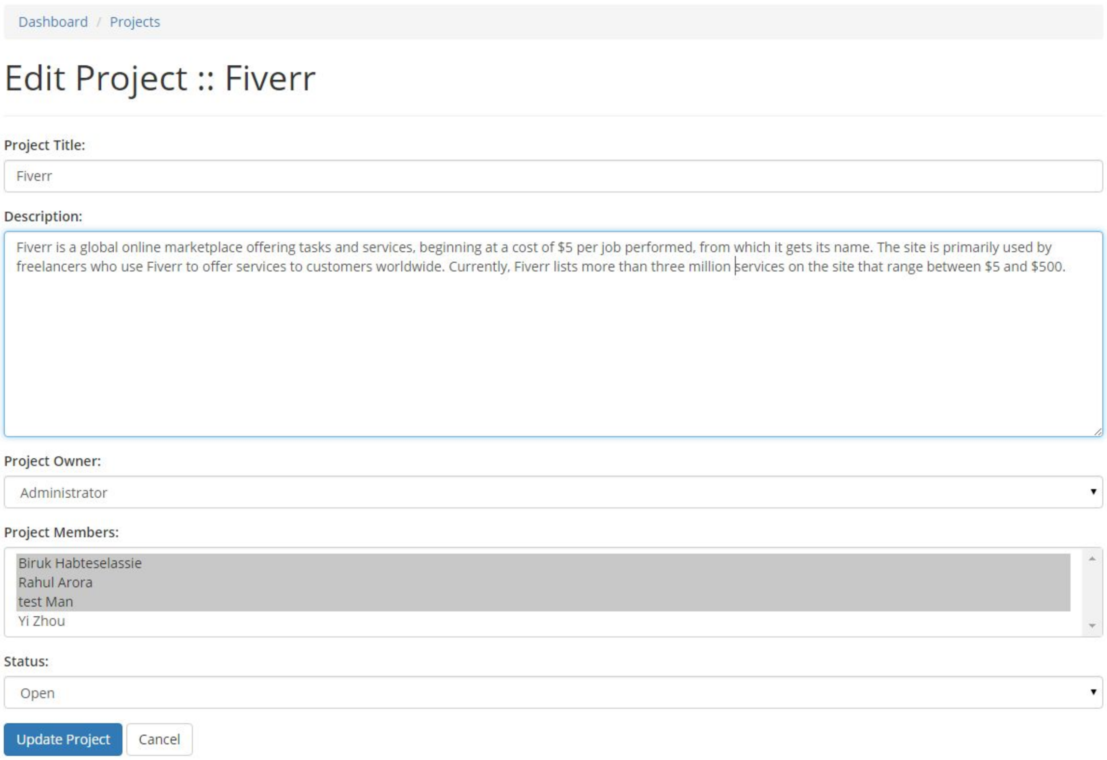


Figure 4.2.2 The edit project form.

### 4.2.2 Delete a project

The project owner can delete a project. Deleting a project removes the project permanently from the data base.

Steps :

- Select *project management* on the dashboard(see Figure 4.2)
- Select the *Delete* button
- The system asks for confirmation
- select OK to delete or Cancel to reject the delete

## 4.3 Requirements management

This module handles the creation of new requirements and management of existing requirements. The owner of a project adds requiremnts to the project. It also allowes for editing and deleting existing requirements.

### 4.3.1 Requirements View

The list of requirements under a project are displayed.

Steps :

Select a project from list of projects in the project view (4.2.1)

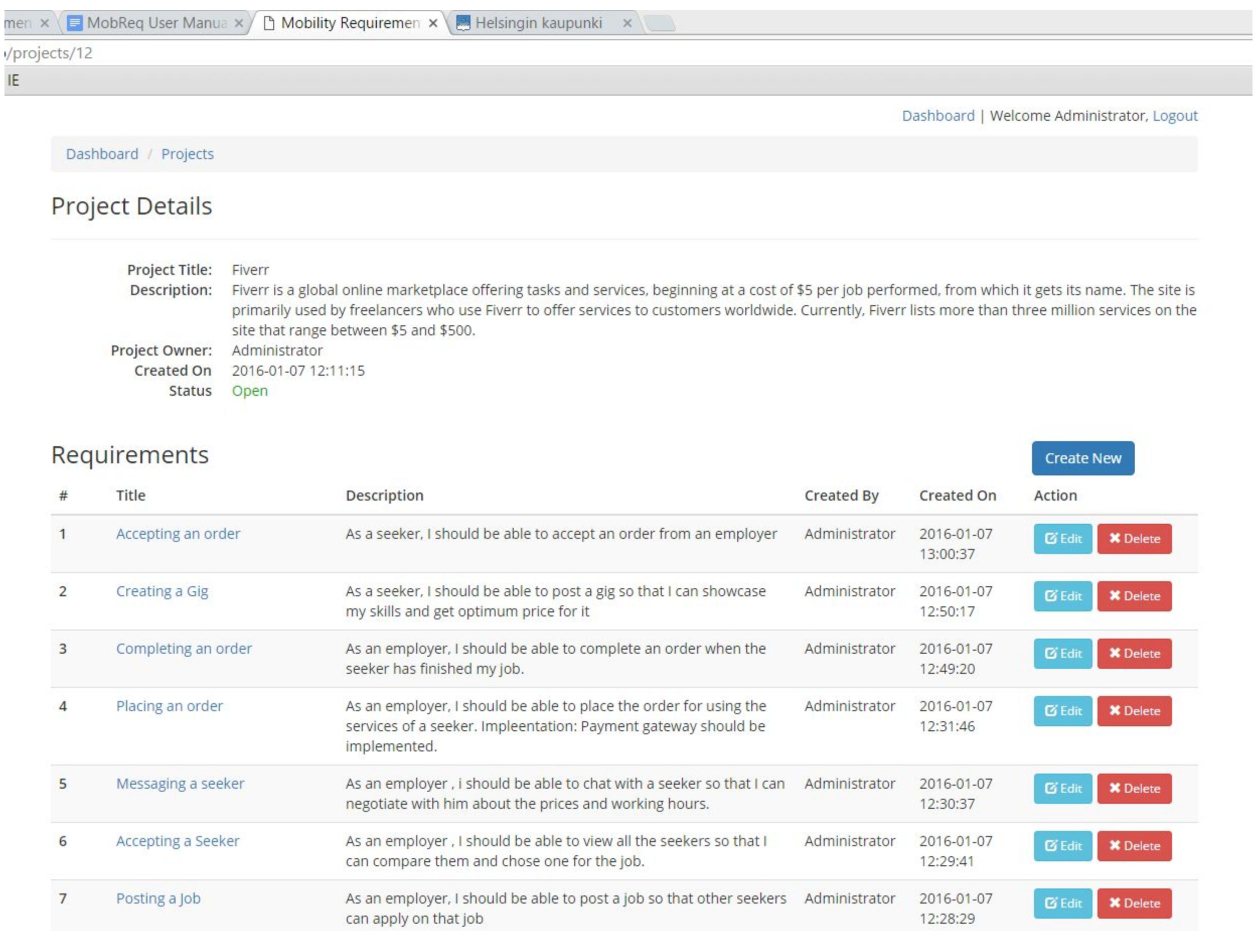


Figure 4.3.1 list of requirements.

### 4.3.2 Create a new requirement

The owner of a project creates a requirements.

Steps :

- Click *Create New* button (see fig. 4.3.1)
- The Create a New Requirement form
- Enter necessary info
- Click *Add new* button

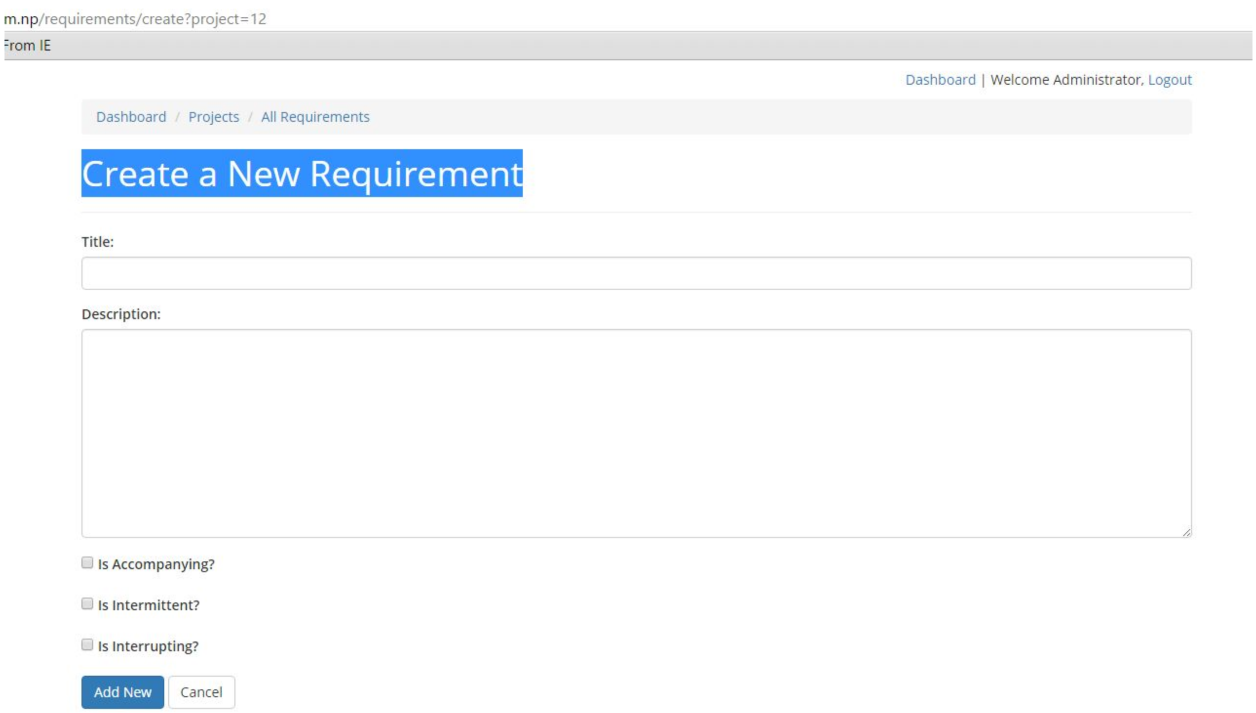


Figure 4.3.2 Create new requirement form.

### 4.3.2 Edit requirement

The owner of a project can edit a requirement.

Steps :

- Go to requirements view (see Figure 4.3.1)
- the list of requirements is displayed

- Select *Edit* button
- Edit requirement info by updating the desired fields
- Select *update* button

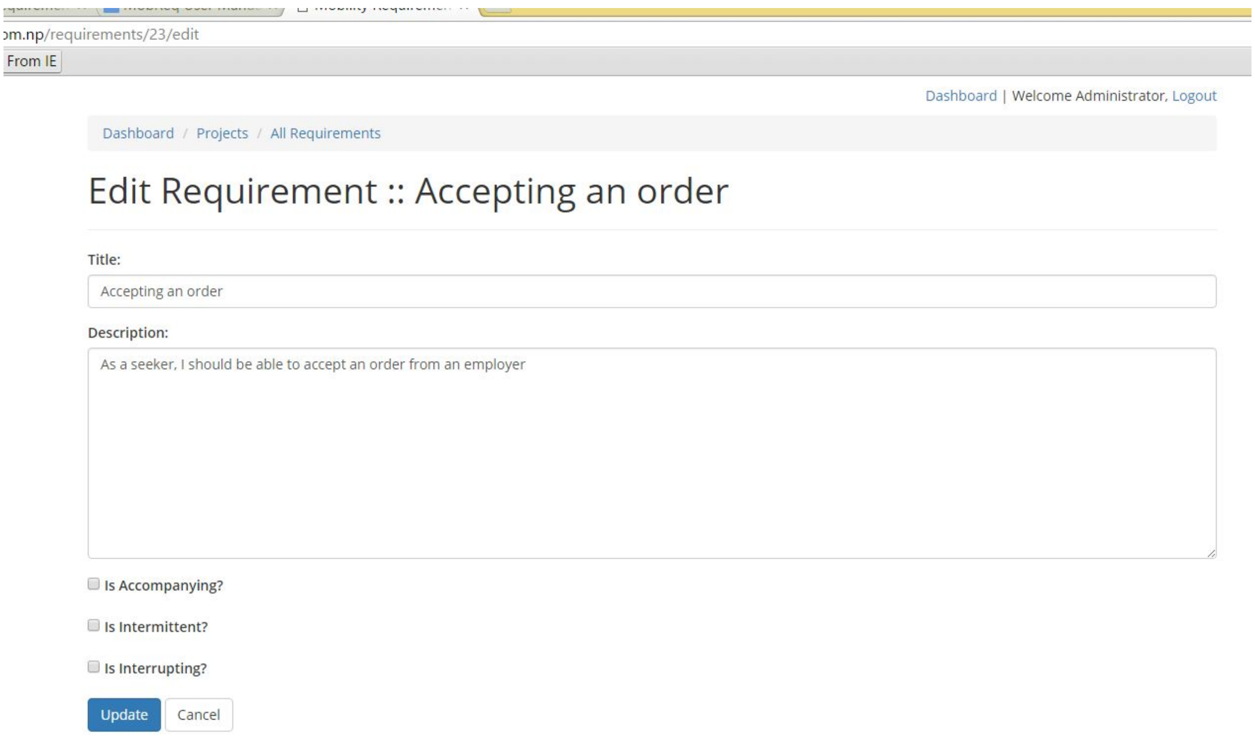


Figure 4.3.2 Edit requirements form.

### 4.3.2 Delete requirement

The project owner can delete a requirement.

Steps :

- Go to requirements view (see Figure 4.3.2)
- List of requirements is displayed
- Select the *Delete* button
- The system asks for confirmation
- select OK to delete or Cancel to reject the delete

## 4.4 Voting

The analysts rate the 12 predefined contexts for each of the requirements in a project. Analysts can only vote on projects they are member of.There are 12 predefined contexts and the analysts rate them giving high rate to contexts that they think are primary contexts of the requirement.

Steps:

- On the user dashboard select the tab “As a member”
- select a project from the list of projects displayed
- Select a requirement from the list of requirements
- The requirements detail page is displayed
- rate the 12 predefined contexts

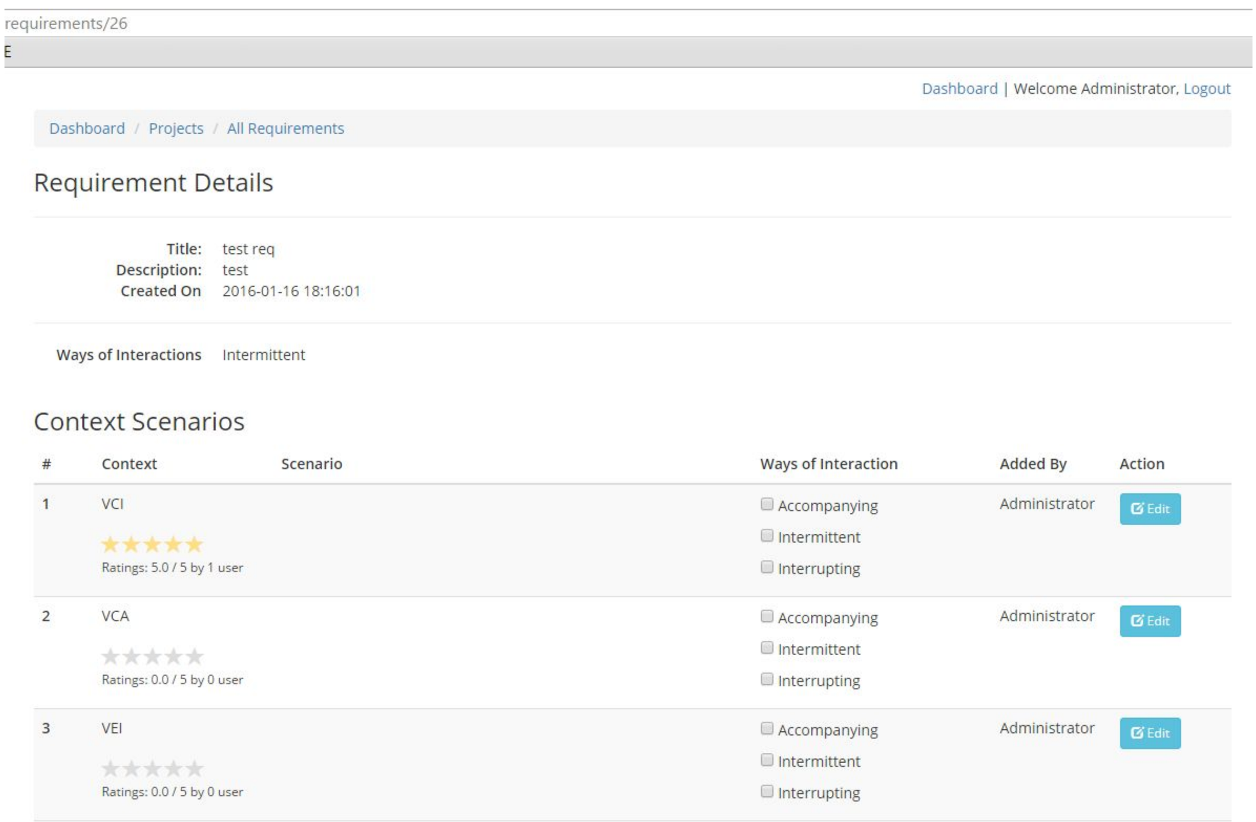


Figure 4.3 partial view of the voting page.

## 4.5 Conflict Identification

After the project manager closes the voting on a project the requirement can be reviewed to see if there was a conflict with the ideal way of interaction and the way of interaction stated by the manger. Only the project owner can see the review of the each requirement.

Steps:

- Go to requirements view (see Figure 4.3.1)
- The list of requirements is displayed
- Select the requirement you want to see the review
- Select the Review Requirement button
- In the requirement detail page the conflicted way of interaction for each context are displayed in red color
- The project owner can add remarks to resolve the conflict in the remark filed

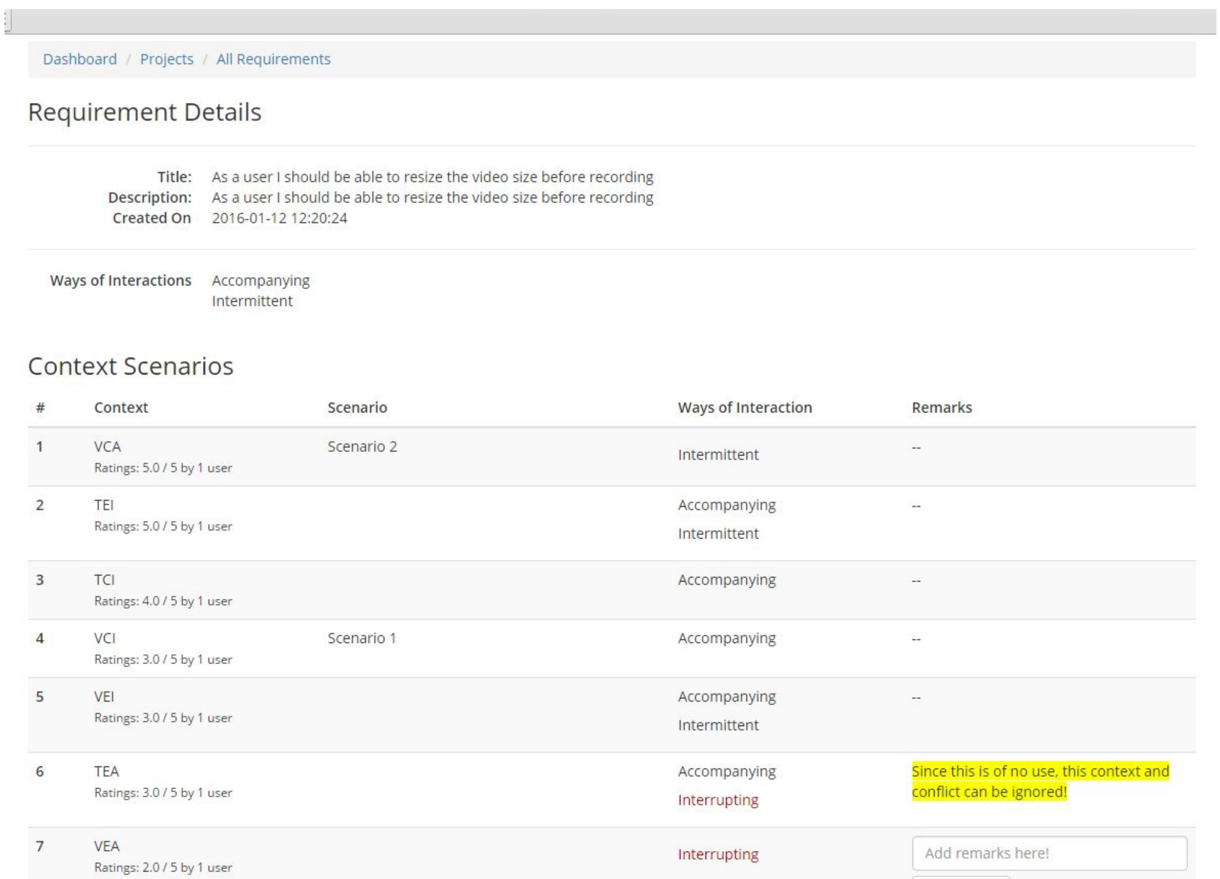

Figure 4.5 requirements review page.