DOSE Project (Distributed and Outsourced Software Engineering)

Software Requirements Specification for Let's Go!

Prepared by

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1 Introduction

This document describes and specifies the needs of the customer, being the main source of information for design development of a product to support distributed software development teams.

1.1 Purpose

This requirements specification fully describes the external behavior of the application. It also describes nonfunctional requirements, design constraints, and other factors necessary to provide a complete and comprehensive description of the requirements for the software.

1.2 Scope

The scope of this project comprehend deliverables to create a online service that allows Agile and Scrum teams to collaborate with highly interactive using digital taskboards.

The figure 1 shows the workbreakdown struture. This deliverables are more exploted in the sections 2 and 3.

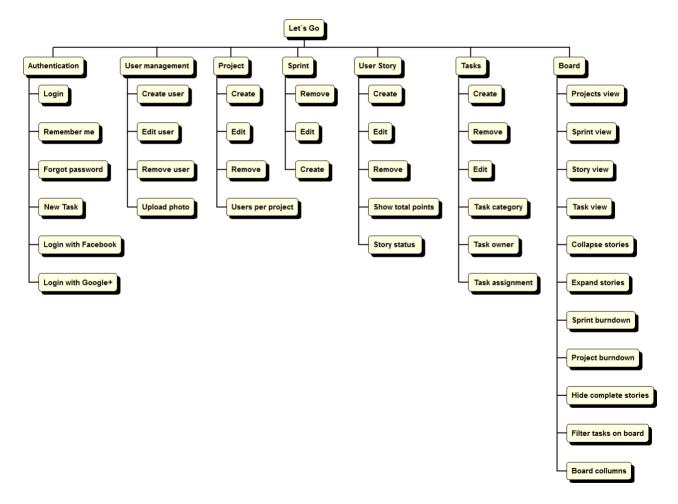


Figure 1: Work breakdown structure (WBS)

1.3 Definitions, Acronyms and Abbreviations

- UC: use case.
- Sprint: is the same iteration, but in Scrum is called sprint. It is a single development cycle, usually measured as one week or two weeks (lengths can vary).
- SRS: Software Requirements Specification.

1.4 References

Date	Document	Resources
August	Project overview	Prof ^a Sabrina
September, 12 2014	Assignment #2, Part 1: To write clarification requestt	Clients Time of analysts
November, 04 2014	Requirements Review	Group7 (Google Docs)
November, 10 2014	Meeting	Skype

1.5 Overview

The SRS contains the description of functional and non functional requirements in sections 3.1 and 3.2. Section 3.3 presents the use case diagram and the use cases's description. Finally, to improve the comprehension and supporting information the documentation brings the main screen system's in the section 4.

2 Overall Description

2.1 Product perspective

This product will provide a taskboard, simple (pretty easy) and flexible designed specifically to meet the needs of distributed Agile teams. These teams will use this software for projects management, which enable he/ she creates a new project and its structure (sprints, stories and tasks). This software enable also monitoring of the project evolution. It's, basically, a simple and flexible task board.

In the first time is necessary that user registers her/ himself in the software "Let's Go!" (figure 5). After the register, user does login (figure 6) and access the main screen (figure 10). In the first use, the main screen will be empty and user can create a new project and its iterations/ sprints (figure 13). They must invite their team (other registered users) and they start the project.

In others moments in which users interacts with the system, they can view project features, project progress and tasks' status. The hierarchical structure of a project is shown in figure 2. This figure does **not** represent any specific diagram of the software internal structure. The idea is to represent the hierarchical relationship between the parties that make up the project.

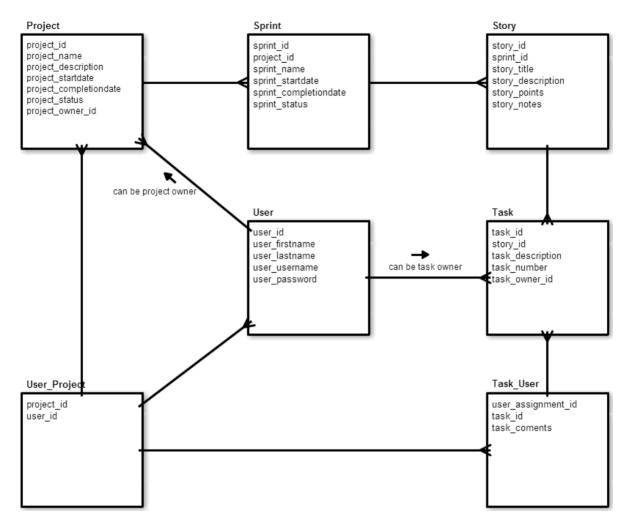


Figure 2: (preliminar) Project structure

2.2 Product functions

Basic Functions

- Taskboard: is the project workspace. The screen for the user that is already associated with at least one task in a project is Taskboard (<u>figure 17</u>). Taskboard contains the project name and its sprints, stories and tasks.
- Projects: Let's Go! system will support multiple projects. After login, user views his/her projects board (the projects created by him/her or those he/she is member). If the logged user is not associated with any project (<u>figure 10</u>), the only thing he/ she can do is create a new project (<u>figure 11</u>).
- Backlog: a collection of user stories that need to be implemented in a project. The
 developers can assign "points" to a user story. This information will help the team to
 know its velocity and the effort necessary to have the user story done.

- Sprint Backlog: users stories selected that will be developed in the current project Sprint, in other words, those tasks needed to complete the Sprint.
- Tasks: the smallest identifiable and essential piece of a job. Users stories are broken into tasks. Tasks may match traditional steps in a development life cycle, for instance: Design, Development, Unit Testing, System Testing, User Acceptance Testing, Documentation, etc. Each task may be broken into smaller tasks.
- Control user permissions: Let's Go! system must provide access control to sign in and to
 access projects but, in this version will not have different user roles (all users will have
 the same access permissions to all functions).

Advanced functionalities (optionals)

- Burndown Chart (<u>figure 24</u>) or statistics to show the project performance to compare planned x real.
- Team communication tools (chat, planning poker tool)
 - o Chat has priority in advanced functionalities.
- Integration with other platforms (Github, Bitbucket)

2.3 User characteristics

Let's Go! was designed for distributed Agile and Scrum teams. The main profile are software developers, although the Let's Go! can be used by other stakeholders in order to monitor the project's progress. Any logged user can create a new project and its structure (sprints, stories and tasks). A user can be associated with multiple projects.

2.4 Constraints

The system does not provide:

- cost management
- people management
- mobile interface

2.5 Assumptions and dependencies

- A project can be created by any user.
- Work management will be done throughout the project team.

3 Specific Requirements

3.1 Functional Requirements

Requirement ID	[FR1]
Title	Authentication(login)

Description	The system shall provide authentication services to enable users access the system to read, write, update and delete the data they have stored in Let's Go! system. If the login fails, the system should provide the user ways to solve this.	
Priority	Priority 1 - mandatory.	
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.	

Requirement ID	[FR2]
Title	Create, Retrieve, Update and Delete Project
Description	The system shall provide the options of: create project, retrieve project, update project and delete project. In the retrieve option, the system shall provide projects information like name, description, status.
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

Requirement ID	[FR3]
Title	Create, Retrieve, Update and Delete Sprint
Description	The system shall provide the options of: create sprint, retrieve sprint, update sprint and delete sprint. In the retrieve option, the system shall provide sprints information like name, start date, status.
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

Requirement ID	[FR4]
Title	Create, Retrieve, Update and Delete Story
Description	The system shall provide the options of: create story, retrieve story, update story and delete story. In the retrieve option, the system shall provide storys information like title, desciption, points, notes.

Priority	Priority 1 - mandatory.	
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.	

Requirement ID	[FR5]
Title	Create, Retrieve, Update and Delete Task
Description	The system shall provide the options of: create task, retrieve task, update task and delete task. In the retrieve option, the system shall provide tasks information like description, number, assignments and comments.
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

Requirement ID	[FR6]
Title	Change status Task
Description	The system shall provide the option of change status task. User will move tasks between the columns (drag and drop) or choose edit task (status field).
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

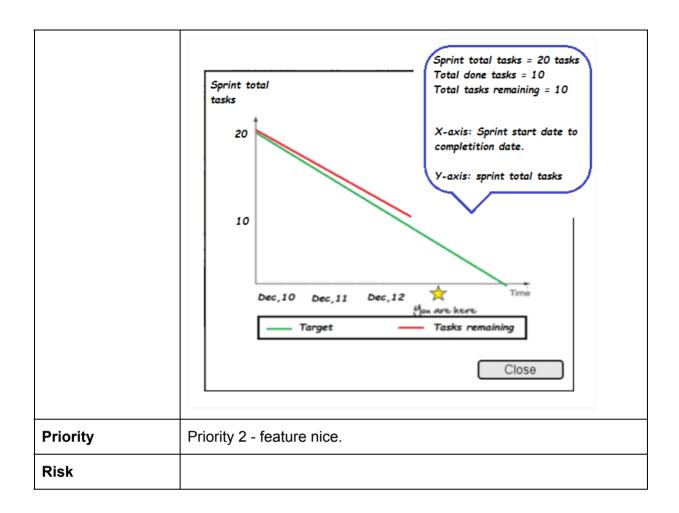
Requirement ID	[FR7]
Title	Share project
Description	The system shall provide the option to share a project. Only users within a project can be assigned to a task that project.
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

Requirement ID	[FR8]
Title	Collaboration
Description	The system shall provide collaboration mechanisms like chat.
Priority	Priority 2 - feature nice.
Risk	High (H) - It will impact the main functionality of the system. Some function of the system could be inaccessible, but the system can be generally used.

Requirement ID	[FR9]
Title	Assign task to a user.
Description	The system shall provide the option to assign task to a user.
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

Requirement ID	[FR10]
Title	Resources agiles
Description	The system shall provide support agile metrods like Project, Sprint, Story and Tasks.
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

Requirement ID	[FR11] - optional
Title	Burndown Chart
Description	The system should display a chart about sprint project progress. The burndown is a chart that shows how quickly team are burning through your customer's user stories. It shows the total effort against the amount of work the team must deliver each Sprint. X-Axis: The sprint timeline (days between start date and completition date) Y-Axis: The work (total tasks) that needs to be completed for the sprint.



3.2 Non-Functional Requirements

Requirement ID	NFR1
Title	Portability
Description	The system should run on any plataform (Windows and Apple).
Priority	Priority 2 - feature nice.
Risk	Critical (C) - make it impossible for users to use the system

Requirement ID	NFR2
Title	Availability
Description	 The system should be available 24 hours a day day, 7 days a week. Unavailability due to maintenance must be notified 24 hours in advance.
Priority	Priority 1 - mandatory.

Risk	Critical (C) - It will break the main functionality of the system. The
	system cannot be used if this requirement is not implemented.

Requirement ID	NFR3
Title	Security
Description	1. Login requirements (authentication)
Priority	Priority 1 - mandatory.
Risk	Critical (C) - It will break the main functionality of the system. The system cannot be used if this requirement is not implemented.

3.3 Use Cases

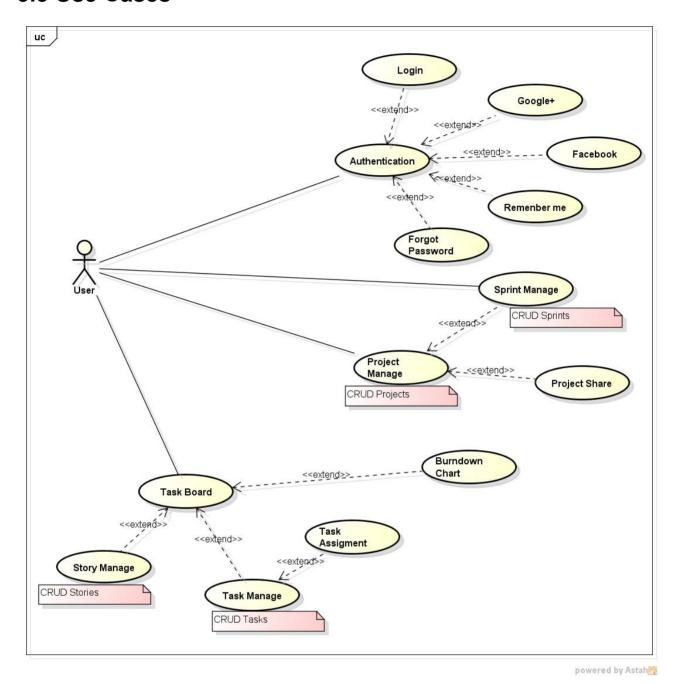


Figure 3: Use Case Diagram

Use Case ID	UC 1.0
Use Case Name	Authentication
Description	This use case Authentication (login access) details login steps of a user; it is necessary to gain access to other functionality of the system.
Actors	User
Preconditions	None

Normal flow	 The system presents fields for login and password. The user inserts her/ his e-mail (username). The user inserts her/ his password. The user clicks on Login button. The use case ends successfully.
Alternative flows	None
Exceptions	Invalid User or Password a. If username or password cannot be located, the system presents a message "Incorrect username or password combination. Try again!". b. The system presents two options: "Forgot your password?" and "Not Registered?"
Posconditions	User logged.
Notes and issues	The system default language is English.

Use Case ID	UC 2.0
Use Case Name	Project Manage
Description	This UC allows to perform the actions to: create, read (retrieve), delete and update the projetcts
Actors	User
Preconditions	User must be logged.
Normal flow	 Create: User chooses create new project User fills the project's description User defines the date to start and completion date User indicates the current projetc's status: open, close User submit the project The system presents a confirmation message "Projetc created successfully!" Retrieve: User chooses the option to view a list of projects The system presents a list of projects User select a project The system open the project selected The system presents a confirmation message "Project edited successfully!" Update: User chooses to edit the project User submit the project edited The system presents a confirmation message "Projetc edited successfully!" Delete (Remove Project): User chooses to delete the project

	 4.2. The system presents a message to confirm the action 4.3. User confirms the action (remove project) 4.4. The system presents a confirmation message "Projetc removed successfully!"
Alternative flows	The project already exists
Exceptions	 The user aborts the use case. The system doesn't conclude the action. The use case ends.
Posconditions	Project created/ updated/ deleted.
Notes and issues	None

Use Case ID	UC 2.1		
Use Case Name	Project Share		
Description	This UC allows users to share the projetcs with other stakeholders or key people of the company.		
Actors	User		
Preconditions	User must be logged Just will be able to invite registered emails		
Normal flow	Invite People 1. User indicates the emails of the people that will recive the project 2. User writes some message about the project or other information 3. User submit the invitation/ message 4. System presents the dialogue box "Message sent successfully!" Clear Invitation 1. User can decide to clear fields: "invite people" or "message" 2. User press the "clear option" 3. System deletes the description's field		
Alternative flows	 User invites members that not have access to the project so far The platform notifices that the user don't have a login (or valid login) 		
Exceptions	 The user aborts the use case. The system doesn't conclude the action. The use case ends. 		
Posconditions	Projetc shared with stakeholders.		
Notes and issues	To share a project, user must be in the "Project Share" interface.		

Use Case ID	UC 3.0
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Use Case Name	Sprint Manage		
Description	This UC allows to perform the actions to: create, read (retrieve), delete and update sprints		
Actors	User		
Preconditions	User must be logged. User is linked to at least one project. User selected the project work.		
Normal flow	 Create: User chooses create new sprint User fills the sprint's name User defines the date to start and completion date User indicates the current sprint's status: future, closed, planned, in progress User submit the sprint The system presents a confirmation message "Sprint created successfully!" Retrieve: User chooses the option to view a list of sprints The system presents a list of sprints User select a sprint The system open the sprint selected Update: User chooses to edit the sprint User changes data(s) User submit the sprint edited The system presents a confirmation message "Sprint edited successfully!" Delete (Remove Sprint): User chooses to delete the sprint User chooses to delete the sprint User chooses to delete the sprint User confirms the action (remove sprint) The system presents a message to confirm the action User confirms the action (remove sprint) The system presents a confirmation message "Sprint removed successfully!" 		
Alternative flows	None		
Exceptions	 The user aborts the use case. The system doesn't conclude the action. The use case ends. 		
Posconditions	Sprint created/ updated/ deleted.		
Notes and issues	A sprint belongs to a project. To manage sprint, user must select the project "of work".		

Use Case ID	UC 4.0
Use Case Name	Taskboard (<u>figure 17</u>)

Description	This UC represents the taskboard to control software development process. Users will be able to add new stories, manage stories, include new tasks.		
Actors	Users		
Preconditions	User must be logged		
Normal flow	 User viewing his/her taskboard. User chooses option to manage stories (UC 4.1), option to manage tasks (UC4.2) or option to view Burndown Chart (UC 4.3). The system presents stories and its tasks organized by status (in columns). User can move tasks among all process statuses (columns): not started, in progress, completed and blocked, according to current task status. 		
Alternative flows	None		
Exceptions	 The user aborts the use case. The use case ends. 		
Posconditions	None		
Notes and issues	Any user logged and linked to the project in question can move tasks between the columns (drag and drop).		

Use Case ID	UC 4.1		
Use Case Name	Story Manage		
Description	This UC allows to perform the actions to: create, read (retrieve), delete and update stories.		
Actors	User		
Preconditions	User must be logged		
Normal flow	1. Create: 1.1. User chooses create new story 1.2. User fills story's title (mandatory) 1.3. User fills story's description (optional) 1.4. User fills story's points (mandatory) 1.5. User fills notes (optional) 1.6. User submits the story 1.7. The system presents a confirmation message "Story created successfully!" 2. Retrieve: 2.1. User chooses the option to view a list of stories 2.2. The system presents a list of stories 2.3. User selects a story		

	 2.4. The system opens the story selected 3. Update: 3.1. User chooses to edit the story 3.2. User changes data(s) 3.3. User submits the story edited 3.4. The system presents a confirmation message "Story edited successfully!" 4. Delete (Remove Story): 4.1. User chooses to delete the story 4.2. The system presents a message to confirm the action 4.3. User confirms the action (remove story) 4.4. The system presents a confirmation message "Story removed successfully!" 	
Alternative flows	None	
Exceptions	The user aborts the use case. The system doesn't conclude the action. The use case ends.	
Posconditions	Story created/ updated/ deleted.	
Notes and issues	A story belongs to a sprint.	

Г			
Use Case ID	UC 4.2		
Use Case Name	Task Manage		
Description	This UC allows to perform the actions to: create, read (retrieve), delete and update tasks.		
Actors	User		
Preconditions	User must be logged User is allocated in a project/ sprint		
Normal flow	User is allocated in a project/ sprint 1. Create: 1.1. User chooses create new task 1.2. User fills task's description and task's number 1.3. User defines assigned tasks 1.4. User submit the task 1.5. The system presents a confirmation message "Task created successfully!" 2. Retrieve: 2.1. User chooses the option to view a list of tasks 2.2. The system presents a list of tasks 2.3. User select a task 2.4. The system open the task selected 3. Update: 3.1. User chooses to edit the task 3.2. User changes data(s) 3.3. User submit the task edited		

	 3.4. The system presents a confirmation message "Task edited successfully!" 4. Delete (Remove Task): 4.1. User chooses to delete the task 4.2. The system presents a message to confirm the action 4.3. User confirms the action (remove task) 4.4. The system shows a confirmation message "Task removed successfully!" 	
Alternative flows	None	
Exceptions	 The user aborts the use case. The system doesn't conclude the action. The use case ends. 	
Posconditions	Task created/ updated/ deleted.	
Notes and issues	 A task belongs to a story. Anyone can take to assigned the task. Tasks don't need to have a user assigned when the task is added to the user story 	

Use Case ID	UC 4.3	
Use Case Name	Burndown Chart	
Description	his UC allows to perform the action to view Burndown Chart.	
Actors	User	
Preconditions	Jser must be logged. Jser must be in Taskboard screen.	
Normal flow	User clicks in Burndown Chart icon. The system presents the Burndown Chart related to this Sprint.	
Alternative flows	None	
Exceptions	None	
Posconditions	None	
Notes and issues	None	

4 Supporting Information

- User-interface prototypes.
 - The prototypes of screens shown in this section should serve as guidelines for the development of GUI (graphical user interface).



Figure 4: Let's Go! home screen prototype

Browser		
← → O ★ http://letsgoteam.com		
		<u>Home</u> <u>Login</u> Register
	Register First name:* First name Last name: Last name Email * Email Address Password:*	Definitions: The email is unique. First name: string (30); Last name: string (30); Email: string (60) Password: alphanumeric(8)
	Register Cancel *Indicates required field	

Figure 5: Register screen prototype

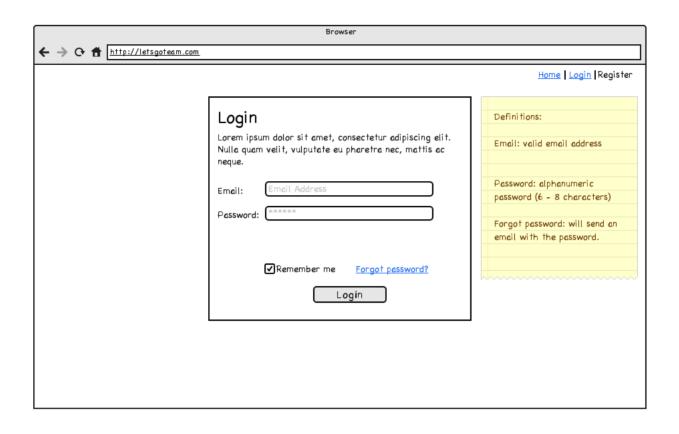
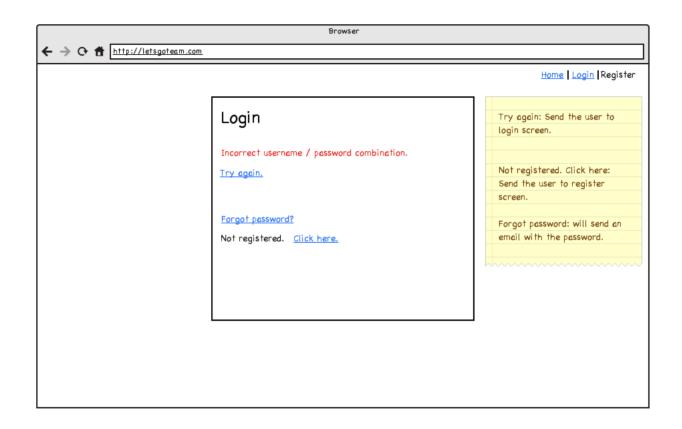


Figure 6: Login screen prototype



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Figure 7: Login fail screen prototype

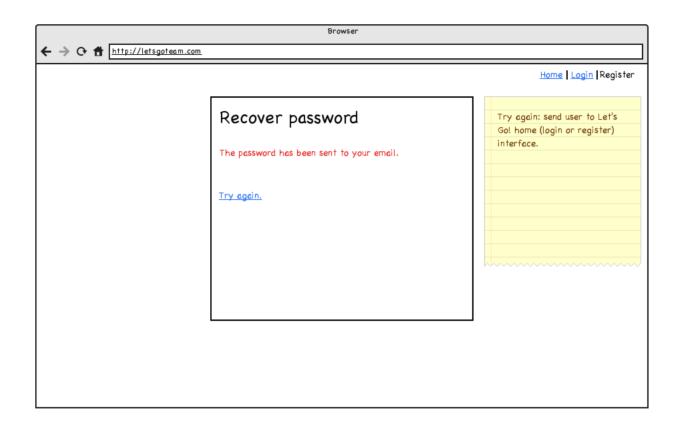


Figure 8: Login fail screen prototype

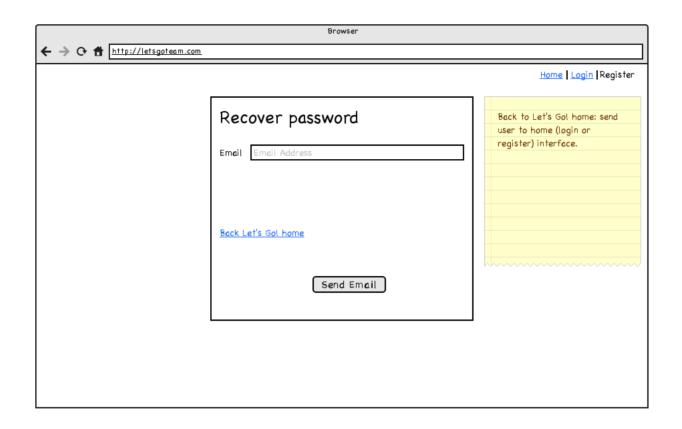


Figure 9: Login fail screen prototype

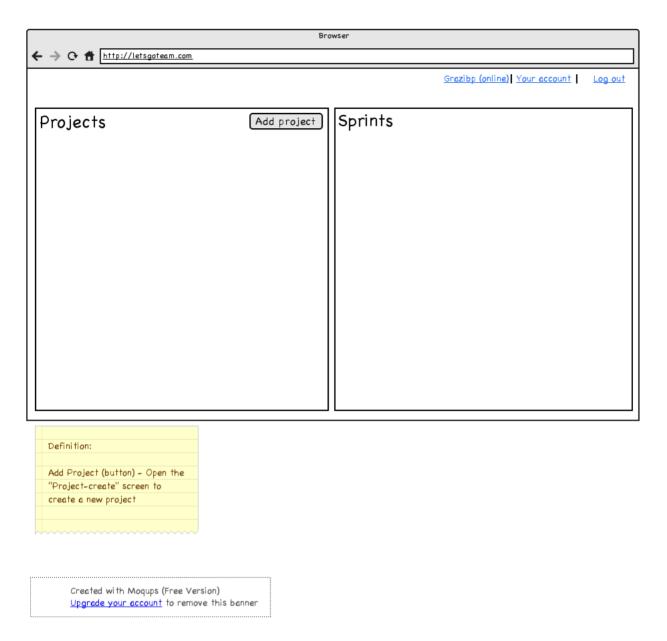


Figure 10: The main screen for users not associated with projects.

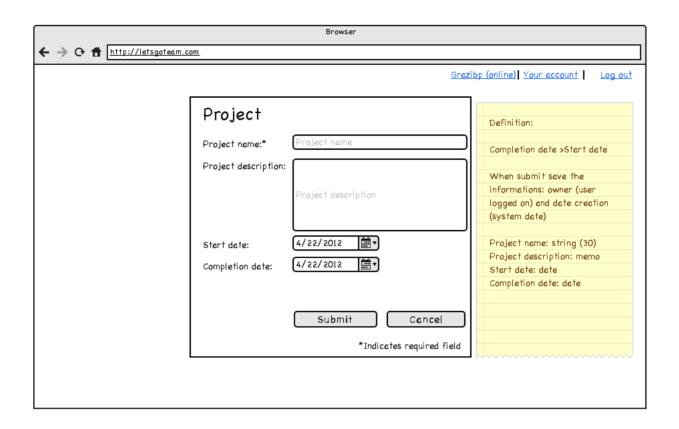


Figure 11: Project Create screen prototype

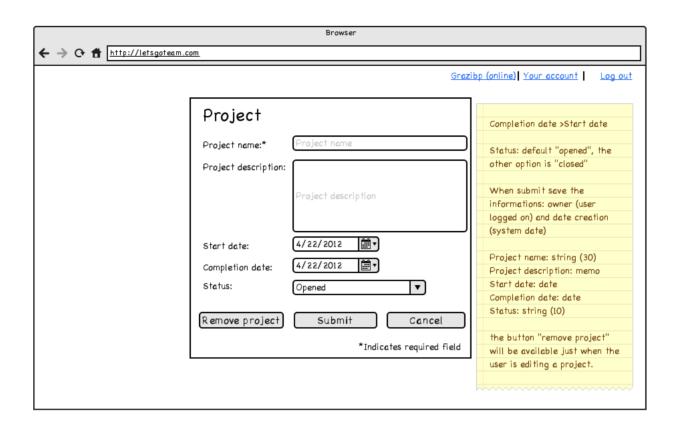


Figure 12: Project Edit screen prototype

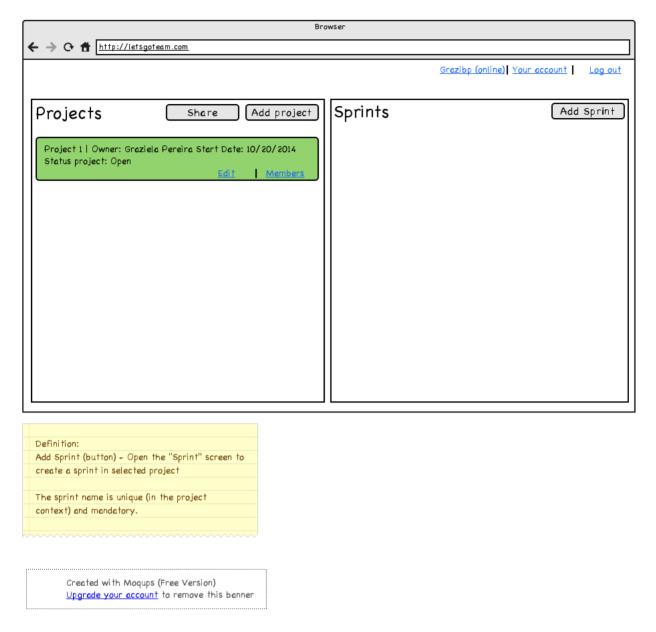


Figure 13: Projects and sprints screen prototype. There is a project but have not yet created Sprints for it.

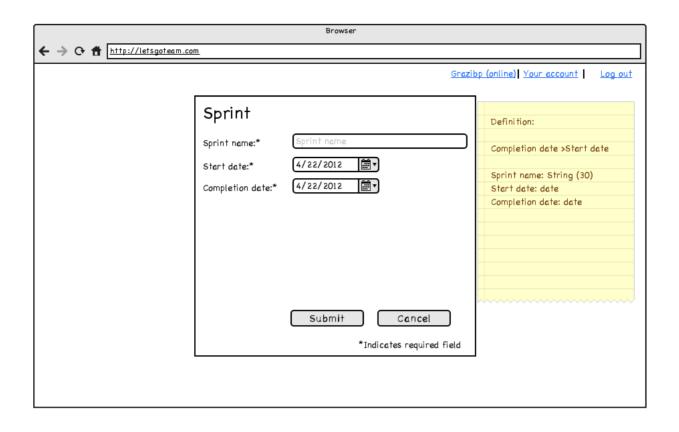


Figure 14: Sprint Create screen prototype

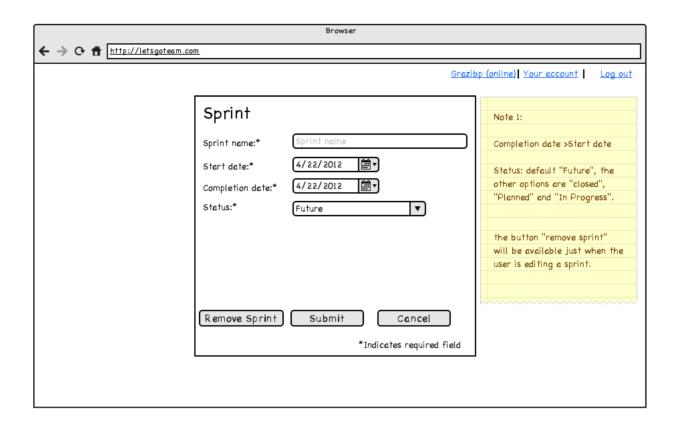


Figure 15: Sprint Edit screen prototype

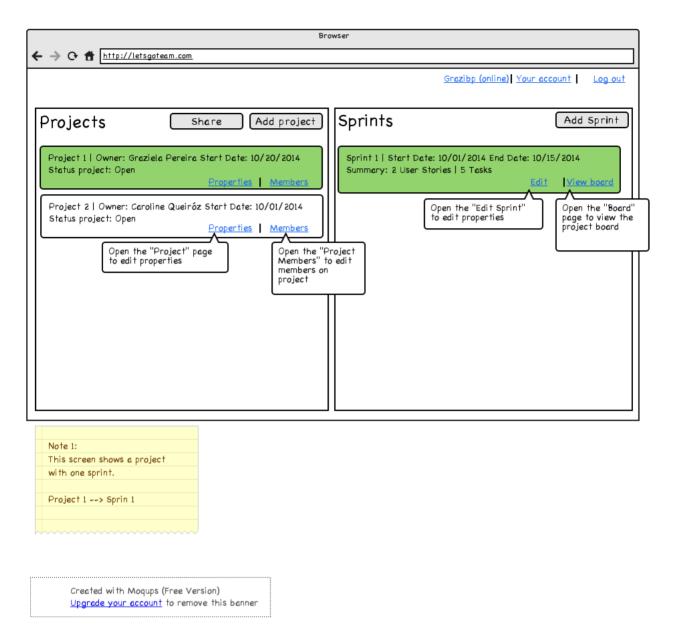


Figure 16: Projects and Sprints screen prototype. There are projects and Sprints.

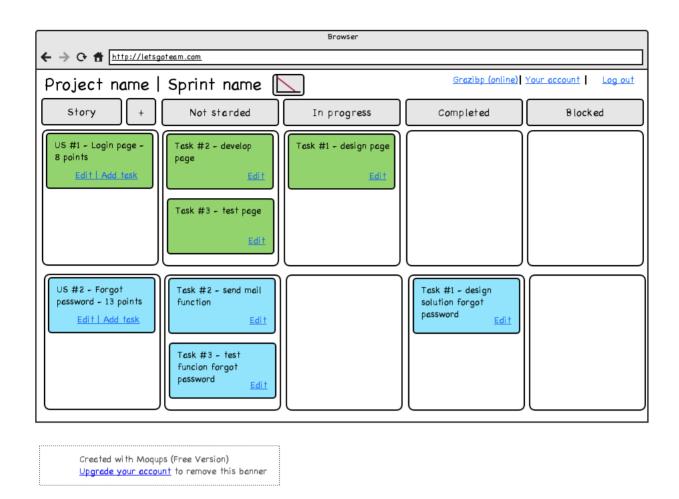


Figure 17: Taskboard screen prototype

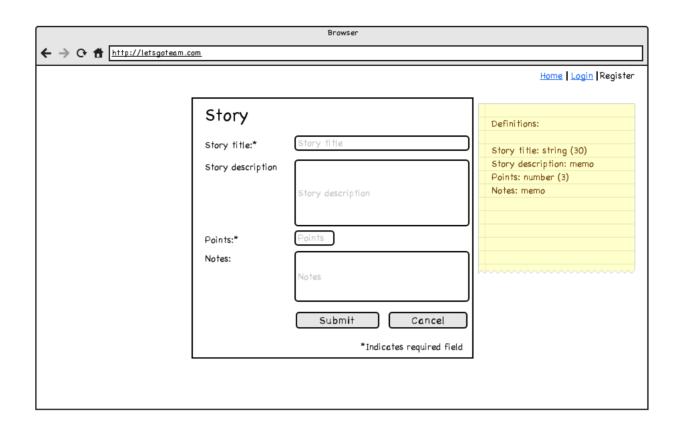


Figure 18: Story create screen prototype

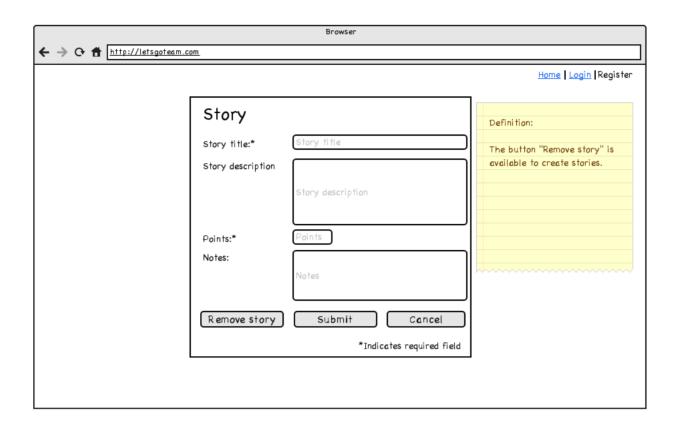


Figure 19: Story edit screen prototype

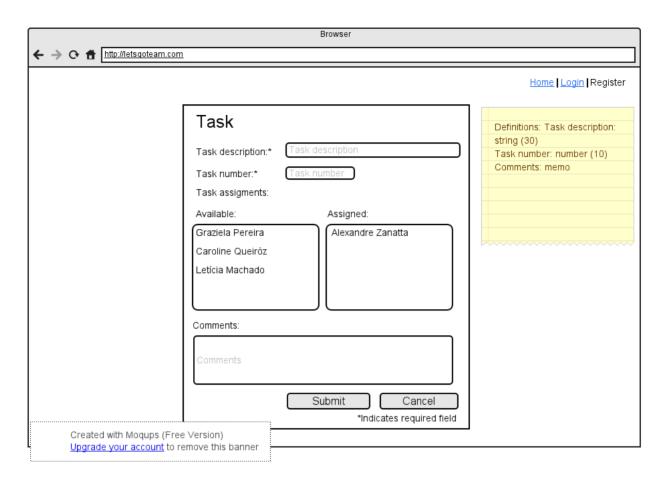


Figure 20: Task create screen prototype

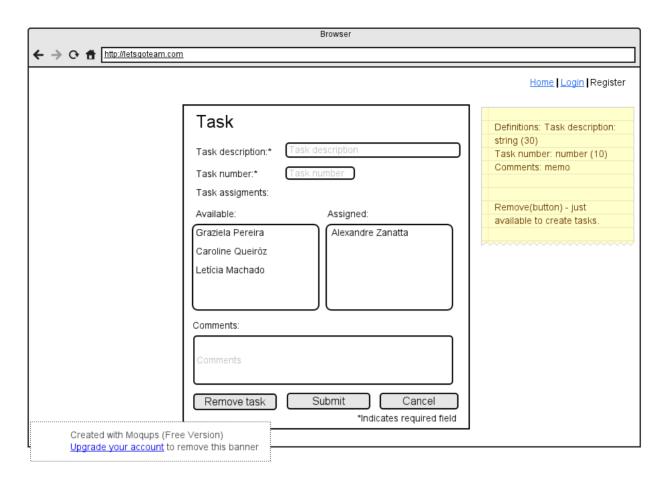


Figure 21: Task edit screen prototype

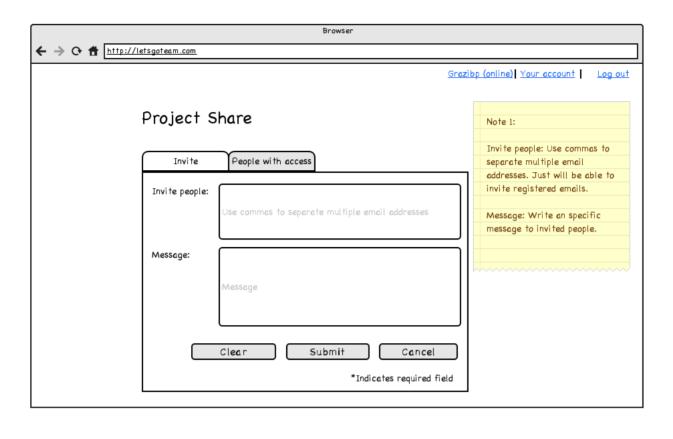
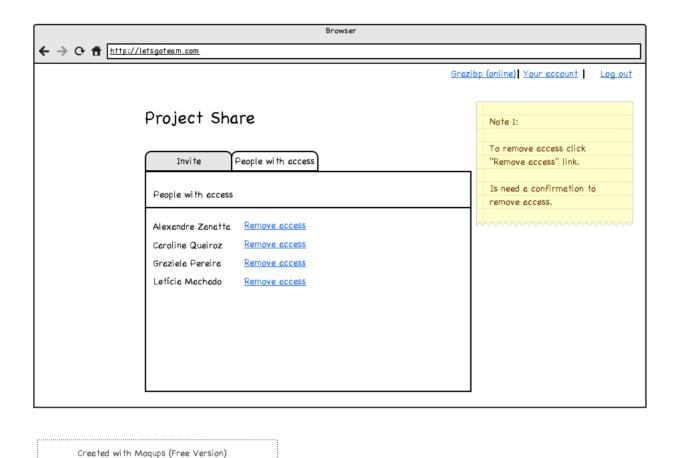


Figure 22: Project share (invite people) screen prototype



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Figure 23: Project share (people with access) screen prototype

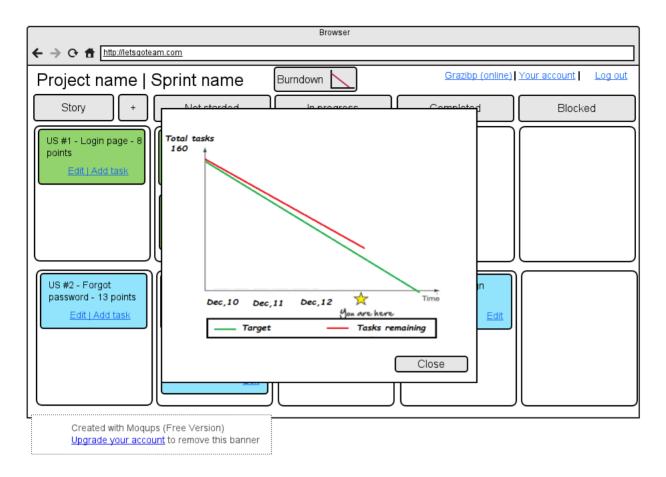


Figure 24: Brundown Chart screen prototype