

Requirements Analysis Document

Application: Votify



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1. Introduction

1.1 Purpose of the system

The application that we have to develop is Votify, which is a social application in which citizens can collaborate by joining different groups made for people with common interests (or creating their own) and by proposing and voting for projects, which will be sent to the government to seek approval if they receive enough votes in less than 30 days.

The application will be a desktop app with a graphical user interface, which will be intuitive in order to be easy to use by the users.

1.2 Scope of the system

Votify has to allow citizens to collaborate to get enough votes so that their projects get sent to the government to ask for funding.

1.3 Objectives and success criteria of the project

The application has to be able to do the following things to be considered successful:

- Users should be able to register and login in the application.
- Users should be able to both create and join groups and to create and vote projects.
- Group representatives should be able to create subgroups of groups created by them.
- Admins should be able to administrate the app with the following powers: Ban user, unban user, accept registration, accept project and accept group.

1.4 Definitions, Acronyms, and abbreviations

<u>Proponent</u>	– User that proposes a project.
<u>Representative</u>	– User that creates a group.
<u>Popularity Report</u>	– Shows the number of votes that a project has received.
<u>Affinity Report</u>	– Shows the affinity of two different groups by using the following formula: (projects created by group 1 and supported by group 2 + projects created by group 2 and supported by group 1) divided by (projects created by group 1 + projects created by group 2).

2. System Description

2.1 Functional Requirements

The system supports three actors: unregistered user, registered user and administrator. The options that each of them has to interact with the application are shown below.

2.1.1 Unregistered User

2.1.1.1 . Fill in the registration form with a username, a national ID and password. The username needs to be unique in the app, so the user has to type a name that is not registered yet.

2.1.2 Registered User

- 2.1.2.1 . Logout from the application.
- 2.1.2.2 . Query groups or projects.
- 2.1.2.3 . Subscribe to groups the user wants to belong to.
- 2.1.2.3 . See notifications.
- 2.1.2.4 . Vote for a project (as an individual or as a representative of a group).
- 2.1.2.5 . Unsubscribe from a group the user is subscribed to.
- 2.1.2.6 . Create a group (which makes the user who created it the representative of the group).
- 2.1.2.7 . Create a project (which makes the user who created it the proponent of the project).
- 2.1.2.8 . As a representative of a group you can create subgroups of that group.
- 2.1.2.9 . Check on a project the user voted for seeing its popularity report.
- 2.1.2.10 . In case a user belongs to a group, he can perform an affinity report between his group and another one.
- 2.1.2.11. In case a user is the proponent of a project, he can send the project to an external entity for funding.
- 2.1.2.12. View the state of a project that the user has voted for.

2.1.3 Administrator

- 2.1.3.1 . Authorize or decline a registration.
- 2.1.3.2 . Ban or unban registered users.
- 2.1.3.3 . Approves or not a project proposed by a registered user.
- 2.1.3.4 . Sets the quantity of votes a project needs before it can be submitted.
- 2.1.3.5 . An administrator can also do everything a registered user can.

2.2 Non-functional Requirements

2.2.1 Usability

The application has a Mouse-driven graphical user interface and occasionally requires the use of a keyboard (to write a name for a new project for example).

2.2.2 Reliability

The application will be able to manage thousands of users and hundreds of projects and groups.

2.2.3 Implementation

We use java as programming language and java swing to design the GUI. Also to store all the information regarding the application we will use java serialization.

2.2.4 Performance

The application will always be responsive enough, any answer performed by the user will be shown in less than 20ms.

3.1 Use Case diagram

3.1 Use Case diagram



3.2 Use case descriptions

3.2.1 Use Case 1: Create a group

Primary Actor : Registered user.

Stakeholders and Goals:

Registered user: Create a group of people with the same type of interests.

Administrator: Check if the group is appropriate.

Preconditions:

The user needs to login to the app. The user can not be banned.

Success guarantee (Post-conditions):

The group is created. Everyone can query the group and enroll if they want to.

The user that created the group becomes the representative of the group and can vote for any project as the whole group.

Main Success Scenario:

1 The user clicks the button “create a group”.

2 The user types a name for the group that has to be unique and can not be modified.

3 The system saves the new group with no one inside but the user that has created it.

4 The administrator of the app can accept or reject the creation of the group.

Extensions (Alternative paths):

2a. If the name of the group is already taken, the user will have to type another one.

Special Requirements:

Internationalization: group names can be in any language.

Technology and Data Variations List:

None

Frequency:

Medium, we do not expect to have millions of groups, but thousands.

Open Issues:

Ability to chat among people that belong to a group.

Include a picture and a description of the group.

3.2.2 Use Case 2: Create a project

Primary Actor : Registered user.

Stakeholders and Goals:

Registered user: Create a project for funding and achieve/construct something.

Administrator: Check if the project is appropriate and set the minimum number of votes.

Preconditions:

The user needs to login to the app. The user can not be banned.

Success guarantee (Post-conditions):

The project is created. Everyone can query the project and vote for it if they want to. If a user has supported a project then he is able to see the number of votes that it has raised. If the project gets the minimum number of votes in less than 30 days, it will be available to fund it and the creator can send it to an external entity that has the ability to accept or decline the project. If it does not get the minimum number of votes or the entity declines the project, it will be automatically rejected. If the entity accepts the project then users that have voted it, get an ID and are able to see the status of the project.

Main Success Scenario:

- 1 The user clicks the button “create a project”.
- 2 The user gives a name for it, writes a description and type the money he needs.
3. The user clicks “Next” and selects “infrastructure” or “social” and if they want to create the project as an individual or a group representative.
- 4 The system saves the project and notifies the administrator.
- 5 The administrator of the app accepts the project by setting a minimum number of votes, or rejects the project by giving a reason.

Extensions (Alternative paths):

- 2a. If the user has selected an Infrastructure project, he will need to upload an image, scheme or draw of the building that he wants to build and .
- 2b. If the user has selected a Social project, then he will need to specify if it is international or national and he will describe the target.
- 2c. If the name of the project is already taken, the user will have to type another one.
- 2d. If the user creates the project as the manager of a group, then the name will be automatically the name of the group.

Special Requirements:

Internationalization: project names can be in any language.

Technology and Data Variations List:

Option to upload images by selecting them from the computer.

Frequency:

Medium, we expect to have hundreds of projects and some people requesting the creation of new ones.

Open Issues:

Select the images from the internet or google drive.

3.2.3 Use Case 3: Vote for a project

Primary Actor : Registered user.

Stakeholders and Goals:

Registered user: Vote for a project for achieving/constructing something that the user wants.

Preconditions:

The user needs to login to the app and he can not be banned. The user needs to query for the project first.

Success guarantee (Post-conditions):

The user will now be part of that project. He can not remove his vote. He will get notifications when the state of the project changes. The user is able to create a popularity report to see how many people have voted for it.

Main Success Scenario:

- 1 The user clicks the button “search” and types the name of the project he is interested in.
- 2 The user selects the project he wants to participate in.
- 3 The user presses the button vote.
- 4 The system saves the vote.

Extensions (Alternative paths):

- 1a. The user is the representative of a group and wants to vote as the whole group.
 - 1a1. The user has to search for the group.
 - 1a2. The user selects the button vote as the group.
 - 1a3. The user selects the group/s they want to vote for.
- 1b. The user is in a group and its representative had voted for a project as the whole group but the user does not want to do it.
 - 1b1. The user has to query the group.
 - 1b2. The user is able to remove his vote from that project by quitting the group.
- 5a. The user belongs to different groups and they have voted to the same project.
 - 5a1. The system will recognize his participation in the project just once.

Special Requirements:

Quick update (<0.01 s).

Technology and Data Variations List:

None.

Frequency:

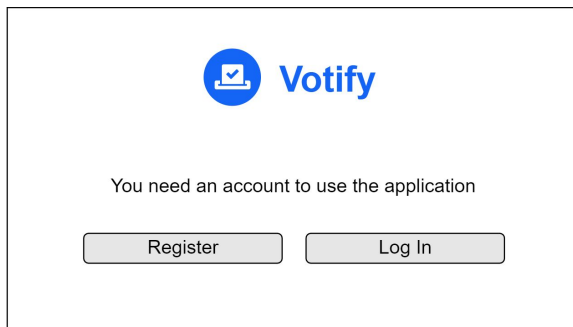
High, we expect millions of users voting for projects.

Open Issues:

Vote the project by scanning a QR code

4. Mockups

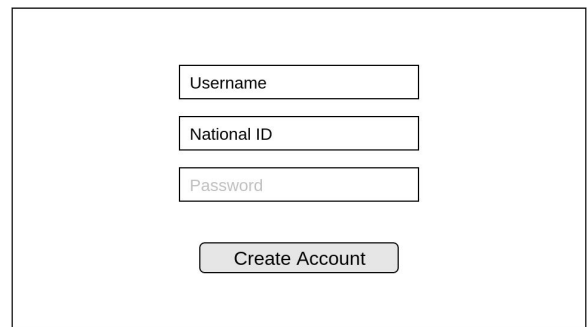
4.1 Initial Screen



The initial screen features the Votify logo at the top, which consists of a blue circle with a white envelope icon and the word "Votify" in blue. Below the logo, the text "You need an account to use the application" is centered. At the bottom, there are two buttons: "Register" and "Log In", both with rounded corners and a light gray background.

In the initial screen the user is able to select “Log in” to enter in the application as a registered user or to create a new account by pressing the button “Register”.

4.2 Registration Screen



The registration screen contains three input fields stacked vertically: "Username", "National ID", and "Password". Each field has a light gray border and a light gray background. Below these fields is a "Create Account" button with rounded corners and a light gray background.

In the registration screen the new user must write a username, a national id and a password. When he has finished he will need to press the “Create Account” button.

4.3 Login Screen

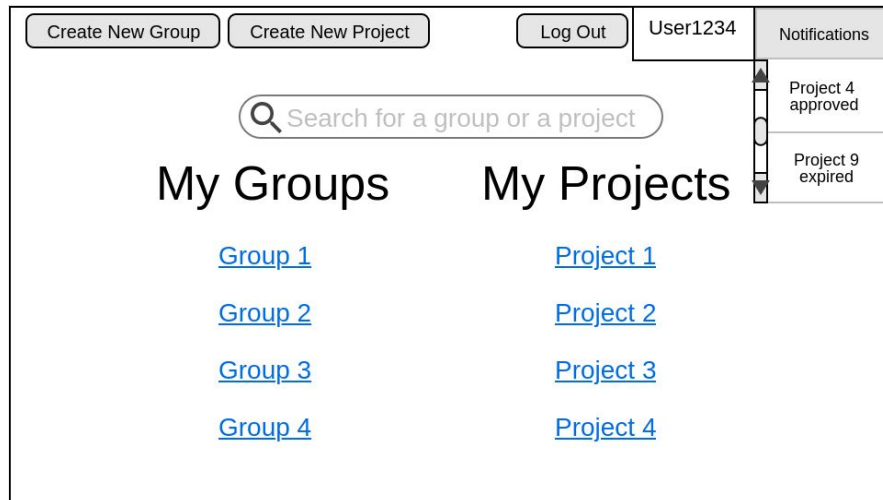


The login screen features two input fields stacked vertically: "Username" and "Password". Each field has a light gray border and a light gray background. Below these fields is a "Login" button with rounded corners and a light gray background. Underneath the button is the text "Don't have an account?" followed by a "Register" button with rounded corners and a light gray background.

The login screen will have two fields in order to write the username and the password respectively. The user will then press the button “Login” to enter the application.

If a new user enters this screen he will be able to create an account by pressing “Register”.

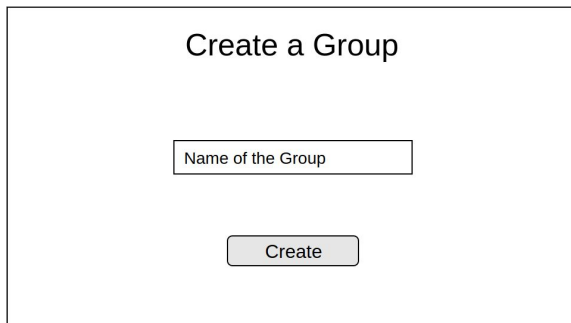
4.4 User Feed Screen



The User Feed Screen mockup features a top navigation bar with buttons for "Create New Group", "Create New Project", and "Log Out". The user is logged in as "User1234". A search bar with a magnifying glass icon and the placeholder text "Search for a group or a project" is positioned below the navigation bar. The main content area is divided into two columns: "My Groups" and "My Projects". Under "My Groups", there are four blue links: "Group 1", "Group 2", "Group 3", and "Group 4". Under "My Projects", there are four blue links: "Project 1", "Project 2", "Project 3", and "Project 4". On the right side, there is a "Notifications" dropdown menu that is currently open, showing two notifications: "Project 4 approved" and "Project 9 expired".

In this screen, users will be able to see the groups they are in and the projects they have voted for. They can also search for groups or projects using the search bar. The user can press “Create New Group” or “Create New Project” to create a new group or project respectively. To log out they need to press the “Log Out”, which will bring them to the initial screen. If you press in the notification symbol, a menu will drop down with all the notifications of the user.

4.5 Group Creation Screen



The Group Creation Screen mockup has a title "Create a Group". Below the title is a text input field with the placeholder text "Name of the Group". At the bottom of the screen is a "Create" button.

In the group creation screen, you just have to enter the name of the group and press Create.

4.6 Group Screen (you're not member)



The Group Screen mockup shows details for "Group 23". At the top, there is a "Go to Feed" button, a "Log Out" button, and the user is logged in as "User2222". Below the group name, it shows "Parent Group: None" and "Subgroups". Under "Subgroups", there are two blue links: "Group 56" and "Group 73", with a downward-pointing triangle next to "Group 73". At the bottom of the screen is a "Join the Group" button.

This screen shows how a user will see a group they aren't part of. You can see the name, it's parent group and it's subgroups. The triangle means that a subgroup has subgroups itself. To join the group press “Join the Group”. The user can go back to their feed by clicking the “Go to Feed” button.

4.7 Group Screen (you're a member)

The mockup shows a header with 'Go to Feed', 'Log Out', 'User1234', and 'Notifications'. The main title is 'Group 23'. Below it, 'Parent Group' is 'None'. Under 'Subgroups', there are links for 'Group 56' and 'Group 73'. At the bottom, there are three buttons: 'Create Subgroup', 'Leave the Group', and 'Create Affinity Report'.

If the user is a member of a group (23 in this case), he will be able to see if it belongs to a parent group (None) and its subgroups (56 and 73). There will be one button to leave the group and another one to create an affinity report. If the user is the representative of that group, on the screen the button “Create Subgroup” will appear.

4.8 Project Creation Screen 1

The mockup shows a header with 'Go to Feed'. The title is 'Create a Project'. There are three input fields: 'Title (max 25 chars)', 'Description (max 500 chars)', and 'Money'. A 'Next' button is at the bottom.

In the first screen of the project creation, the user will have three fields. He will have to write the title with a maximum of 25 chars, a description with a maximum of 500 chars and he will have to type the amount of money requested. When the user has finished, he will need to press the button “Next” to continue with the creation of the project.

4.9 Project Creation Screen 2

The mockup shows a header with 'Go to Feed'. The title is 'Create a Project'. Under 'Type of the project:', there are radio buttons for 'Infrastructure' (selected) and 'Social'. Under 'Create as individual or group representative:', there are radio buttons for 'Create as individual' (selected) and 'Create as a group rep'. Next to 'Create as a group rep' is a dropdown menu labeled 'Groups created by me'. A 'Next' button is at the bottom.


In the second screen of the project creation, the user will have to choose the type of the project. Then they have to choose if they want to create the project as a user or as a group. If they choose the group they have to select a group they created. Then they process, have to press “Next”.

4.10 Project Creation Screen Infrastr.

The mockup shows a header with 'Go to Feed'. The title is 'Infrastructure Project'. Below it is the text 'Upload an image of the project' and a placeholder image. Underneath is a 'District' dropdown menu. A 'Create' button is at the bottom.

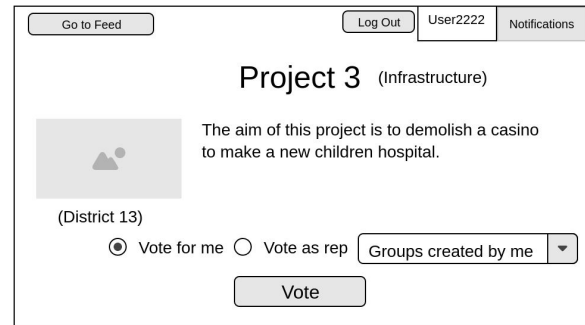
This screen will show up if the user selected the infrastructure option. They need to upload an image of the project and select the district where the project will be done. To finish the project creation the user has to press “Create”.

4.11 Project Creation Screen Social (not voted)



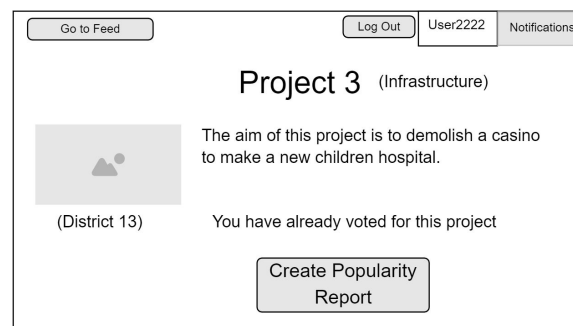
If the user has selected the social project option, he will be redirected to this screen. It will have one field where the user needs to write the name of the social group associated and it will have a round box in order to choose between a national or an international project. There will be a field where the user will provide a description of 50 chars at maximum. When the user has finished typing the information of the project he will need to press the “Create” button to save the project.

4.12 Project Screen



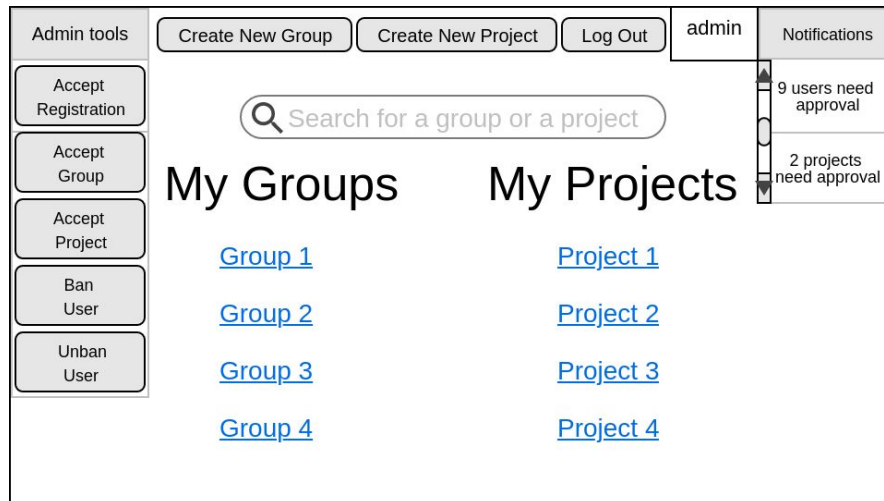
In this screen the user is able to see a project that he has not voted yet. The screen will show the information of the project according to its type. The user will have a round box to select if he wants to vote for himself or a whole group that he has created. In this last case the screen will have a field to select the group. Finally the user will have to press the button “Vote” to submit his vote.

4.13 Project Screen (voted)



In this screen the user is able to see a project that he has voted for. The screen will show the information of the project according to its type. The user can create a popularity report by pressing the “Create Popularity Report” button.

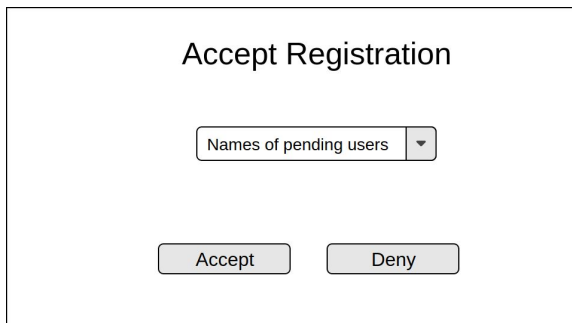
4.14 Admin feed



The Admin feed screen features a top navigation bar with buttons for 'Create New Group', 'Create New Project', and 'Log Out'. A user profile section shows the name 'admin'. On the left, an 'Admin tools' sidebar contains buttons for 'Accept Registration', 'Accept Group', 'Accept Project', 'Ban User', and 'Unban User'. A search bar is labeled 'Search for a group or a project'. The main content area is divided into two columns: 'My Groups' and 'My Projects'. 'My Groups' lists 'Group 1' through 'Group 4', and 'My Projects' lists 'Project 1' through 'Project 4'. A 'Notifications' panel on the right indicates '9 users need approval' and '2 projects need approval'.

The admin feed screen is the same as the user but it adds an “admin tools” menu. If you click on it, a menu will drop down with 5 buttons that allow the admin to administrate the app. Each one of those buttons will open a different screen where the admin will be able to perform an action. The notifications of the admin will also show if there’s any action they need to do, like approve (or reject) a project.

4.15 Accept Registration Screen



The Accept Registration screen has a title 'Accept Registration'. Below it is a dropdown menu labeled 'Names of pending users'. At the bottom, there are two buttons: 'Accept' and 'Deny'.

This screen is only available for the administrator. In the accept registration screen, the admin can see the names of the users whose registration needs to be approved. After selecting one, the admin can either click “Accept” to accept the registration or click “Deny” to deny the registration.


4.16 Accept Group Screen



The Accept Group screen has a title 'Accept Group'. Below it is a dropdown menu labeled 'Names of pending groups'. At the bottom, there are two buttons: 'Accept' and 'Deny'.

This screen is only available for the administrator. In the accept group screen, the admin can see the names of the groups that need to be approved. After selecting the name of a group the admin can accept or deny the creation of the group by clicking “Accept” or “Deny”.

4.17 Accept Project Screen



The 'Accept Project' screen features a title 'Accept Project' at the top. Below it is a dropdown menu labeled 'Names of pending projects'. Underneath the dropdown is a text input field labeled 'Needed number of votes'. At the bottom of the screen are two buttons: 'Accept' and 'Deny'.

This screen is only available for the administrator. He is able to accept a project by selecting the name of the pending projects and then typing the minimum number of votes in a field. The screen will have two buttons: “Accept” and “Deny”.

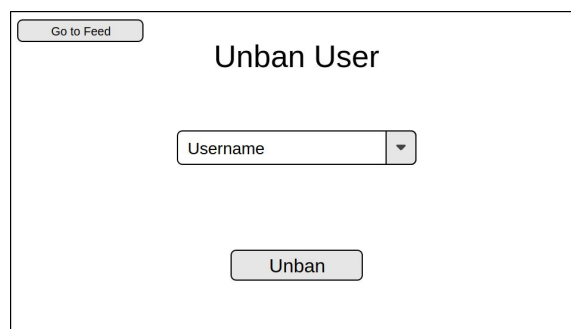
4.18 Ban User Screen



The 'Ban User' screen has a 'Go to Feed' button in the top left corner. The main title is 'Ban User'. Below the title is a dropdown menu labeled 'Username'. Underneath is a text input field labeled 'Reason of the ban'. At the bottom center is a button labeled 'Ban'.

This screen is only available for the administrator. He is able to ban a user by selecting his username from a field. He can also write a reason for the banning. To submit it, he will have to press the button “Ban”.

4.19 Unban User Screen



The 'Unban User' screen includes a 'Go to Feed' button in the top left corner. The title is 'Unban User'. Below the title is a dropdown menu labeled 'Username'. At the bottom center is a button labeled 'Unban'.

This screen is only available for the administrator. He is able to unban a user by selecting his username from a field. He will have to press the button “Unban”.