

UNIVERSITÉ DE TOULOUSE
INSTITUT NATIONAL DES SCIENCES APPLIQUÉES DE TOULOUSE

FINAL REPORT

APPLICATION D'AIDE AUX PERSONNES VULNÉRABLES

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1. Application description

This application was created in order to facilitate the ability for vulnerable people (such as people in hospitals) to be able to find much needed help by volunteers. This application provides a graphical user interface in which vulnerable people can submit requests for help which can be accepted and completed by volunteers. In the same manner volunteers can submit offers which vulnerable people can accept and mark as completed.

The usual pattern in which the application might be used is as follows: a non-registered user can register in the application as a vulnerable person or a volunteer. They provide their first name, last name, username and password while saying whether they are a vulnerable person or volunteer. The administrator of the application can then accept or reject the registration.

After being accepted by the administrator, the vulnerable person can submit requests, view their requests and status and accept offers from volunteers. An accepted offer can then be marked as completed after which the vulnerable person can rate the offer from 1 to 10.

On the other hand, after being accepted by the administrator, volunteers can submit offers, view their offers and status and accept requests from vulnerable people. An accepted request can then be marked as completed after which the volunteer can rate the request. Each user has a rating associated with them which is calculated as an average of all the requests or offers they completed which were rated.

For the purposes of demonstrating the application, three users were created with three different roles attached to them. It is of course possible to create new users but they will have to be approved by the admin account. The three accounts currently created are:

- username: *admin* password: *admin*
- username: *vulnerable* password: *vulnerable*
- username: *volunteer* password: *volunteer*

Additionally, to test the basic application functionalities, four JUnit tests were written that test the creation of users and requests. They of course don't cover all of the application functionalities, but rather demonstrate the way in which tests would be written in a full scale project. They can be run from the folder *Server* with the command *mvn test*.

1.1. Application of the agile methods

In order to make it easier to track all the user stories and requirements for the project, while also being able to incrementally work on the project as a whole, I used the platform *Jira*, a product which allows users to define issues, bugs, and system requirements to be implemented. They are then worked on iteratively in *sprints* after which an increment of the software is produced. For this specific project, I defined three sprints of varying lengths. Each sprint had a specific set of tasks that I needed to work on to implement the increment. After the third spring was done, the application was also finished.

1.2. Git organization

When writing software, it is often beneficial to use a software for version control based on git. For this project I decided to use *Github*. Since I was working alone on this project, there was no fear of there being any merge conflicts so I used two branches: *main* branch which was used for when significant milestone was hit and the *dev* branch which was the primary branch I worked on. Every time I reached a significant milestone, I would open a merge request from the *dev* branch to the *main* branch and merge those two branches. Every time there was a push to the *main* branch, there would be a check which was part of the continuous integration which would make sure the project can compile successfully using maven. The annex contains a graph depicting all the commits to the project over the course of its lifetime. It shows a total of 20 commits done over a period of the month of December. The annex also contains a link to the Github project which has now been

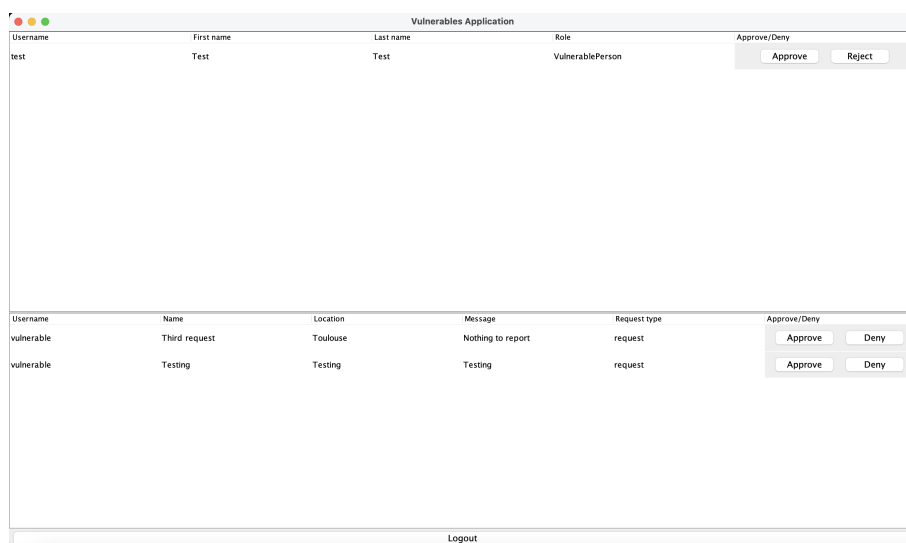
made public.

1.3. Continuous integration (DevOps)

In order to make sure the application was not in any inconsistent state, each time a push was made to the main branch there was a check being done to make sure the application can successfully compile. This was done through Github actions, a continuous integration tool on Github. It can also be found in the Github repository. It is located in the `.github/workflows` folder under the name `maven.yml`.

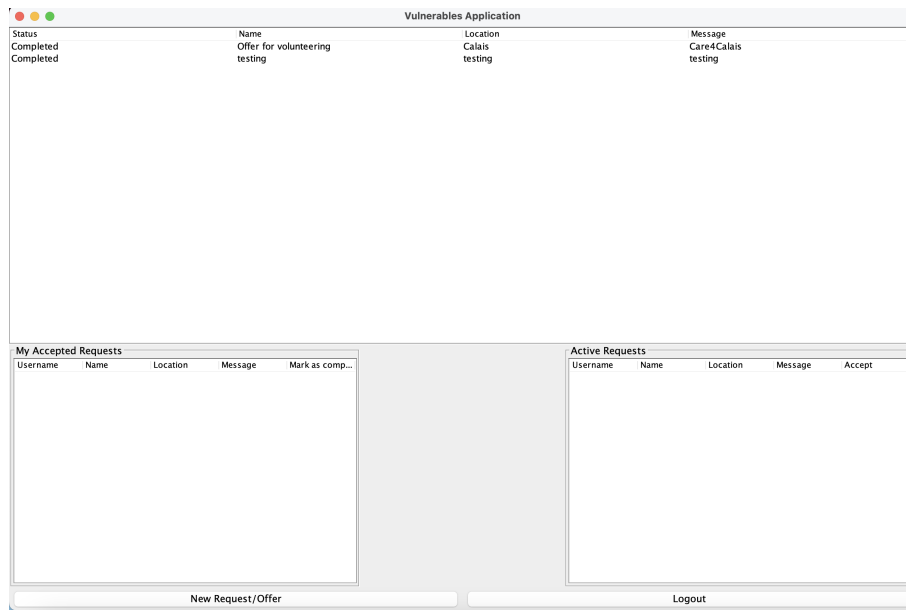
1.4. Annex

Image 1.1. shows the admin user interface. In the top part of the screen they can approve or deny new users and in the middle part of the screen they can approve or deny new offers and requests. Logout button is situated at the bottom of the screen.



Slika 1.1. Admin UI

Image 1.2. shows the volunteer or vulnerable person user interface. In the top part of the screen they can see their requests or offers and their respective status. In the middle of the screen on the left they can see their accepted requests or offers which are currently in progress where they can mark them as complete. On the right they can see other requests or offers which they can accept. At the bottom they can click to create a new request or offer or logout of the application.



Slika 1.2. Volunteer or person in need UI

Image 1.3. shows all the commits that were done to the project. It also shows the relation between the branches *main* and *dev* and all the merge requests that have been made.



Slika 1.3. Github Network graph

Link to Github project:

<https://github.com/sleko01/application-daide-aux-personnes-vulnerables>