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Report of the student housing agency project

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# Introduction of our group and project

## Our group

Our group consists of three people – Rosen Stanchev, Tihomir Kandev and Anna Kadurina. We are first year students at Fontys University of Applied Sciences in Eindhoven, The Netherlands. At this moment, we are at the Advanced Phase for Software Engineering. We all come from different backgrounds and combine our strengths to make a software application in the best possible way. Our group number is 4 and throughout hard work and communication we get things done.

## The application

Our project is created to help users manage information in the Student Housing agency. With company this big and this many clients, it is extremely hard to keep track of everything that is happening. Our program is delivering solutions for all the possible problems that the users could meet. The software application allows the people that have access to it to have a proper overview of the relevant information and some functionalities that help them manage the apartments. In addition to that, the program is efficient and easy to use from both students and administration.

# Current situation and problem description and solutions

## Current situation

After hard work, many ideas, a lot of changes and feedback from our teacher, the application is working without any bugs and is meeting all the requirements. There are currently two types of users – student and admin. There is no registration form, so there are no unwanted users. After the person is logged in, based on the user type, he/she sees an overview of the information and some buttons for the functionalities.

The admin can the information about the students and the apartments. In addition to that, he/she is able to update, delete, and create information. Furthermore, the overviews of all the users that are already linked with an apartment, the others that still do not have one, the complaints, the schedule and the agreements are accessible to him/her. The admin can delete complaints and agreements, create, update, and delete schedule.

The student has access to his/her apartment information. He/She can write complaints directly to the admin, see schedule with chores and tasks and make agreements with other students and see the ones that he/she already has.

## Problem descriptions and solutions

### Administration problem

In a housing agency, having a superior user is a vital part. Someone needs to manage all the profiles, information, and problems in order everything to work properly.

### Administration solution

The students won’t be the only ones that can log in. The second type of users will be the admin. He has power to change details about the clients and their properties. With his control, the management of the data will work accordingly to the way it is supposed to.

### Information management problem

Without the software application, it is extremely hard to manage all the information for everyone. All the users should be up to date with everything that is going on and affects them somehow. There are a few types of users that have access to a variety of information. There are problems occurring when the clients are not able to access the description of their apartment, the schedule, etc. In addition to that, the administration is not able to control and manage all the data.

### Information management solution

When someone logs in, he/she is sent to a new form based on the user type. All the necessary information is displayed and if possible, the user can change it. There are buttons for the different functions that can be used to change, update, delete information, etc. That way, the clients have the details for the apartment they rented displayed alongside with some other functionalities, such as complaints and agreements. Furthermore, the administration can manage the students’ apartments and everything that their clients need to see.

### Communication problem

Our housing agency believes in the rights of a person. Everything should be properly discussed, so that all the users are in an agreement. It is important that every student has a voice and can easily complain about something, report a problem, and communicate with the admin and the other students. This goes both ways. It is vital for the administrator to have an overview of everything that is going on in the rented places and get feedback from the students.

### Communication solution

The students can make agreements with each other so that everything is fair. Both must agree with the condition for the agreement to be valid. The administrator does not accept the agreement, but he/she can see it and if necessary, delete it. The student can directly send complaints to the admin, making solving the problems around the rented place easier. The admin has access to all the information, which gives him/her feedback if everything is okay around the students’ properties.

### Access problem

If there is a registration form, everyone would be able to access the application and make an account. That will lead to unwanted users and useless accounts.

### Access solution

The admin creates the accounts for all the students that have rented an apartment by randomly generating username and password. Only then, the students can log in and see their apartment and everything else that is relevant. Therefore, the application is protected from unwanted users and only the clients and the administration have access to it.

# The process of making the application

At the end of our task, we can surely say that we make a good team, and everyone did their part of the work. The topic of the project was extremely interesting to us, and we were motivated to do best we can so that that everything works properly. Our work was most of the time done at the university where we could talk in peace and discuss ideas. The process was both hard and interesting. For sure we all enjoyed working together and finding solutions to all the problems that we met. Of course, not all the time we could be at the university, some of our meetings were online. Whatever the circumstances were, we always came through and overcame the obstacles that were in our way. We listened to each other’s ideas and all of us had voice in making the decisions.

# Results of the project

Having finished with the project, we are all pleased with the end result. We met the requirements and even went a little beyond. In our opinion, the application is useful and efficient. All the functionalities in the application are working properly. Both user types (students and administration) will benefit from it. The most important tasks can be done – communication between the people, managing the information, making agreements, etc. In addition to that, we are happy with the design – simple, easy to understand, organized.

# Conclusion for the project and future recommendations for improvements

## Conclusion

To conclude, we will say that the whole process of making the project helped us learn new things and work with each other as a good team.

## Possible improvements for the future

Of course, there are always new things that can be added to make the application better. For the future some recommendations are expanding even more the communication than just agreements and complaints, but messages between the users, as well as that, reminders for certain events, tasks (paying rent, doing chores, etc.).

# Final evaluation of the project and self-reflection

## Final evaluation

Our task at the beginning of making the application, was creating useful and efficient program that will help students adapt in their new homes. We think that we successfully managed doing this job. We, as the programmers, are pleased with the result and in our opinion the end-users will benefit from the application. The program is easy to use, simple designed, but practical, and most importantly containing all the important data.

## Self-reflection

During the whole process we learnt new things and expanded our knowledge. We used what we studied during the lectures for Object Oriented Programming and implemented it in our application. In addition to that, we improved our teamwork and communication skills. It was an extremely interesting project that was fun to work on. With every new meeting that we had with the teacher, new and new ideas were coming up. We were always improving the program and by that improving our own knowledge for OOP. Not only the work was always intriguing, but also challenging, but who likes easy tasks? We did our best and are proud of ourselves, because of everything new that we have learnt and all the hard work that we did to achieve the final version of the application.