Advanced Phase Project   
Report

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**Introduction**

This report provides documentation of the process and the result of the Advanced Project task of the application development course offered within the ICT bachelor at Fontys University of Applied Sciences.   
To start with a student housing agency is looking for a software solution to solve problems they have been facing. For some time, the student housing agency has been receiving complaints from their tenants.

•Appointed persons not cleaning the shared facilities.

•Groceries are not done or paid for shared items such as toilet paper, dish soap, etc.

•Garbage disposal is not done on time

•Unannounced parties, gatherings, etc.

In this project our main priority is to provide this housing agency with a software solution which would make them achieve their objectives easier. In the following chapters, there is an overview of the background information, also the problem statement, the processes we used and most importantly the final product and our individual reflection(individual feedback on how the project went and what we could have done differently.

**Advanced Phase Project   
Report**

[The body of your paper uses a half-inch first line indent and is double-spaced. APA style provides for up to five heading levels, shown in the paragraphs that follow. Note that the word Introduction should not be used as an initial heading, as it’s assumed that your paper begins with an introduction.]

**Background**

After receiving a brief description of the insight of this project and what our main objective is. We needed to address this problem not only as a software solution but as an ICT solution. In most cases data visualization was a really helpful tool as we learnt about identifying unique items by ID etc. There were several aspects involved in order to get a finished product on time for the housing agency.

Planning for example was a major key in our project. Without good planning one might encounter some problems in his or her project. Design was also one of the factors we considered. Most importantly we needed to build an application which needs coding for example (critical thinking).

We made a point of deciding what the best approach was going to be for this project, the different ways we could implement each feature that was required and if it was possible to improve on anything or even add additional features.

Focusing on the information we received earlier on, there were a lot of factors that we had to consider such as the company’s demands in implementing the software solution but also providing a useful ICT tool for their tenants which in this case are students.

We started off by reading the assignment and made a list of requirements (mind map) that were needed from us and then we discussed about how we could bring all our ideas together into making a finished product. Afterwards we started making the demos for how the application will look like for the user. We had a couple of ideas but some of them ended up not being used due to a lack of experience with certain tools or due to the limited time.

**Problem Statement**

Student Housing BV needs a software application to see and solve the complaints they have been receiving. The company wants to have a better understanding of the tenants that live in the student housing location and the recent problems they have been facing.

The application would also help in the easy interaction/communication between the company co-workers and the students.

The main feature of the application, as required by the student housing company, would be one that is able to settle disagreements between students through a system that allows them to register agreements between each other, for daily chores such as:

• Throwing away the garbage

•Paying grocery bills or cleaning

All these agreements must be accessible from the company view, to tackle the issue the company is facing. A very important factor is that it is also possible to file a complaint anonymously, for issues that the agreement system can not cover.

To ensure the effectiveness of the software solution, the design and programming are made with classes and methods learnt from our theory class. The user interaction is very easy, the user of the application has very straight forward options in the form of buttons and various screens. The program uses a database to store the different kind of data being sent back and forth between the two different view points: the student and the company.

The two end user versions are meant to solve the problem on both sides: the students are able to see and set agreements between each other, and the company can view the complaints and update the house rules which should also be visual for the tenant/student.

**Process and Result**

To determine the priority of all the features we had in mind, a Moscow method was used to analyze our information received. We needed to also decide which important features would be needed in our project, and which features are not that important but could be useful in expanding the functionality of the application, or even noting features that will not be needed or implemented.

One of the "could have" features in the Moscow list was a suitable "UX and UI design". The process of implementing this feature started with mock-ups of the interface. This step of the process not only aided in building the final UX design, but it also made sure we have all the required fields and pages as needed to fit the client's description.

The UI had 2 different windows.

The first one was purposely meant for a user to be able to login to a system. Although this may sound easy but note we are building a system for both employees in a company and the tenants which in this case are students. Our login UI consist of radio buttons, textboxes, and a login button.

The second version used multiple tap pages.Our main idea here was to implement the first aspect in such a way that when for example an employee logs in, all tap pages are then enabled for that employee but for students not all tap pages are enabled. This was also one of the challenges we faced in making it look more professional. Panels were also included in the second version . The "panels" from the first version are being contained within each other's respective page, a custom control. This turned out to solve the flickering issue, but the tedious challlenge of custom controls is getting every control :button, textbox within the bigger custom control itself.

In the beginning, we did not really have any experience with database connections, which did prove to be necessary to handle the displaying of information in the application.

One of the problems was to sometimes the database connection works properly and sometimes we may encounter some tiny log in problems due to the connection with the database

Also, we needed to add classes where it was needed, the GUI and the beginning of the code was merged in one file. Before we had to submit the first interim version we only managed to make the house rules and the logging in part. For the house rules part, our main programmer could get already made rules from the database, add new rules to the database and remove rules from the database. For the logging part, you could login with the usernames and passwords from the database but note only one page appears after the login aspect.

Gradually as time went on other parts were completed, such as the complaints and the agreements pages, which proved to be a struggle to complete as well.

**Conclusion**

In conclusion, this project proved to be a challenge for all the group members, even in the domains where we had some experiences even during the “covid 19” crisis. The requirements for this project assignment have been met

**Individual Reflection(Paa Kow)**

I ensured that I will try to help the group in any means necessary in order to get the deliverables done on time for our final presentation. By this means I became more time conscious and that has helped me any ways. During the project meetings section I received some feedback session which helped me into understanding what was the main objective and how to accomplish that.

I would say even though I was the project leader. We all brought out our ideas and if anyone needed help with something we brainstorm to get a more simplified solution to the problem. During the group work I tackled the database and the c# coding aspect.

During the group work, I realized my group members were flexible. Flexible in the sense that we all could call anytime even though it was a but stressfull for us especially due to the corona crisis . But I would say we managed to do everything on time.

Considering the status of the project now, I am fully excited about the end result because we put in a lot of effort. In the future projects when it comes to joining other group members, I would always ensure that everyone’s ideas or views would be listened to. Tolerating of eacothers views makes it easier in the sense that, you get to even know things you might have not known yet.

Although we faced some problems. For example communication between group members. Because communication is a major key in a project I assume. So as soon as we had a problem we made it our main objective to find a solution.

**Personal Reflection**(Michael)

Well, this project was kind of stressful for me because this was my first time working on a project like this and it was much harder working on it from home. Besides that, working on the project helped me on some skills like using Classes, Objects and  Methods, working with multiple forms , working with a database, most especially communicating with group members etc. Teamwork and communication is an advantageous skill when working on assignments/projects like this. There was good communication between Paa kow and I though.

**Personal Reflection**(Yani Troev)

The project did have its little obstacles and my initial involvement could have been better due to my shyness, I wasn’t getting involved in the early stages of the conversations but after a little while I got a bit more comfortable with my group mates and started to have a bit more of an active role in the decisions that were being made and the conversations overall. It was a bit of a struggle still with the communication mainly because of my timid personality. But I was still a part of the team and had to do my part so I helped with the decision making and with the code making part. I made the complaints part of the code. If I was to do something different, I would try to be more communicative with the rest of the group and try to open up and have more involvement in the project throughout and not only at the latter parts of the project.