# Process Report SEP2

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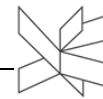**ICT ENGINEERING**

**SECOND SEMESTER 2018**

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# 1. Introduction

The current document is meant to inform both the team and the reader about how the planned activities worked out and how the collaboration and workflow went in our group.

For this project, there was no mandatory given topic, but instead we had the possibility of choosing our own topic from a list of available topics from the school.

The chosen working method for this project was SCRUM since it was the ideal way of managing the team in an agile way.

The group's activities for this assignment were organized in sprints. There was a total of 13 sprints for the give project and each of them were held weekly one for each week. Our group scheduled the weekly sprints to take part every Thursday at 8: 20 AM. The meetings were scheduled to last around 8 hours per meeting but sometimes were cut short due to some group members had to leave early.

Each sprint had its own sets of requirements all having a grade of importance and a workload estimate. Some tasks took more time to complete than originally estimated and at some point, we fell behind of schedule because of this.
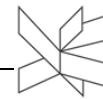
A time schedule in form of a Gantt Chart was made for this project and this helped in keeping track of the given tasks and helped in organizing our group work.

A log book (journal) was made for this assignment and each sprint has been documented accordingly. In this document information regarding estimate times and actual times for different requirements has been kept and served for the creation of our burndown chart.

At a certain point in the project, we stumbled with certain tasks and had difficulties in advancing further. As a result, we seemed help from our supervisors during the scheduled meetings, which were held each week on Thursday.

The meetings went well and problems that we encountered were solved, allowing us to advance further with our project.

The work flow went smooth in most cases, since we had a good organized team prior to starting the work. Each member did his tasks and did not hesitate to ask for help when problems started appearing.

## 2. Group Description

Our group is made of 5 people. Them being Oskars Arajs, Taha Alzein, Fadi Dasus, Alexandru Vieru and Muhammad Nadeem.

Oskars comes from Latvia and he has studied electrical engineering in Latvia. He has worked in the field for a while each summer while studying and realized that that carrier isn't for him, so he came to Denmark to pursue a new challenge in ICT. During his spark filled early days as an electrician he got to work on construction sites and for private customers and he learned the value of hard work and determination. He has experience working on different projects, but he did so alone. Because in Latvia there is a different teaching method were most of the projects are done individually. So, he was a good worker but had to learn to rely on others.

Taha comes from Syria. He is like the leader of our group because he has a lot of experience working with people and different projects. He studied software development and so he is our go-to guy when we have questions, or we need to settle an argument. He has been the underling to the big bosses and he has been the leader of his own projects. He likes to try new things and be a part of every part of the project. As his Belbin role is a specialist he truly gets irritated when his time is being filled with nonsense or otherwise being wasted.

Alexandru comes from Romania and has a large personality that others may take offense to. Not for him being rude, but bluntly honest. If he sees a problem in our project that should not be there he will call it out. He is an interesting person to work with because he has a good sense of humor and a large capacity for hard work. Taking notes and listening to lectures is just a small part of what he brings to the project group. Being invested and taking the tasks to their full extent is something that he takes pride in.

Muhammad comes from Pakistan. At first, he seems shy and doesn't want to bother the rest of the team if he doesn't know something. But it turns out that he is a smart and talented guy that knows a lot programming, even though last semester was his first-time coding and developing.  His Belbin roles described him accurately, but he didn't let that stop him from getting really in tune with java and easy run with databases. His technical skills and theoretical knowledge comes in handy when the project period starts, and the deadlines are approaching.

Fadi also comes from Syria. He studied as a dental technician and worked in that field for two years. He comes on as a funny and sincere guy but if you start messing up the projects he is a part of he will get frustrated and give arguments on why you should not have done that. Thanks to his previous education and practical training, he knows the importance of being precise and planning what needs to be done. He is very meticulous keeps an eye on the deadlines so that we don't miss anything while being distracted by the project or other assignments.

## 3. Project Initiation

In this chapter we will discuss on how the topic for this project was received by our group. The topic for the current project was chosen from a list of available cases given to us by the school.

Our topic of Clinic Management System has been chosen since it posed a challenge being very similar to a real-world topic and we would gain a significant amount of knowledge by completing this task. This would not only test our skills gained from our first semester but also from the second semester and would reflect what we have learned so far.

The group was formed free of choice and not imposed by our supervisors. All of us decided to work together since some of us collaborated with each other in the previous semester and knew of each other's personality and working ethics.

Our planning for this project went well, since we implemented an agile method called SCRUM for the give assignment. This helped us to break down the time allocated in multiple sprints which were held weekly and each of them had a set of assigned mandatory tasks which had to be completed before the next sprint started.

The project was organized in such a way that each sprint would be considered a milestone, given that all the required tasks in that sprint would be completed before the next one started.

However, since this happened in real world and not in theory that was not always the case for our situation. Sometimes we fell behind schedule due to certain tasks being more complicated than others and could not always follow the planned schedule.

These issues fortunately have been resolved and we were able to get back on track by allocating more time to catch up with tasks that we fell behind on and were able to get back on track.

This has been accomplished since we used several project planning tools which helped the group in organizing and keeping track of the whole project.

These include the use of Gantt chart which has been used to monitor the activities and the sprints allocated for this assignment. Based on the kept log book, we were able to document how each sprint went and what has been accomplished during that meeting. Estimated hours have been given for each tasks of the respected sprint and at the end actual hours could be subtracted for each task.

This helped in the creation and implementation of a burndown chart which helped us in keeping track of our progress and kept the group informed if it was falling behind or was ahead with certain tasks.

Another tool used for this assignment was in the form of a risk assessment table which served as a reminder of what risks this project would pose and what would happen if some rules would be broken.

Certain risk assessments where assigned to one person, but in the end, we all decided to share that risk since it would diminish the probability of that being broken and cause more damage to the project's flow.

Communication prior to the scheduled meetings was kept by means of social media and once again proved to be effective in sharing information, ideas and even rescheduling meetings in some cases.

Even though some group members lived further away from others, efforts were made and we all met at the agreed time and place.

# 4. Project Description

The problem statement for this project was created based on the case we received from the school and the project proposal that was uploaded earlier on. Our customer required 3 tasks which were critical to accomplish.

A client server-based system, multiple user possibilities and a database where information could be stored and retrieved.

Following those 3 tasks, we were able to create a customer description and the methodology that will be used for this assignment.

The most important aspect was to understand our client and what he truly wanted from us. As such certain questions had to be asked to get a better idea of his needs.
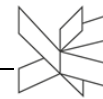
In the delimitation part of the problem statement we chose the methodology and the aspects that were most important and relevant for this project and discarded those that were not relevant.

An important tool called Risk Assessment was used for this report. This was essential for the workflow in our group since certain factors could ruin the whole project.

Risk were analyzed accordingly and categorized by grade of importance meaning that certain rules would cause more harm than others if they were to be broken.

This helped us to better understand the level of involvement for this assignment and practice caution not to break any of the set rules.

A group contract was also written and agreed upon by all the members were certain rules have been established. This made sure that each member knows of what the responsibilities are given to them and what are the consequence of breaking them.

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## 5. Project Execution

In this chapter we will discuss how the execution for this project went in our group and what methods were used to meet the deadline.

The agile method called SCRUM was used for managing this project since it gave flexibility and the possibility of turning back and reviewing a certain step in the report if needed.

When using this method, we followed 4 steps. Inception where we analyzed the user stories from our customer and build use cases, categorize requirements, scenarios and so on based on them.

Elaboration where the design part of the project came into place and the corresponding diagrams were created such as conceptual, class diagram, activity diagrams and so on. These would serve as the blueprint for the future code we would write and test for this assignment.

Construction and testing phases where linked together since instead of writing all the code and testing it after, we chose to segment it in smaller parts and test it at the same time.

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This method diminished the risk of starting all over again and saved time in the long run. With this flexibility in our group, we were able to fulfil all the given tasks and produce a satisfactory outcome.

The tasks have been split equally between all group members and this made the workflow run smoother.
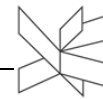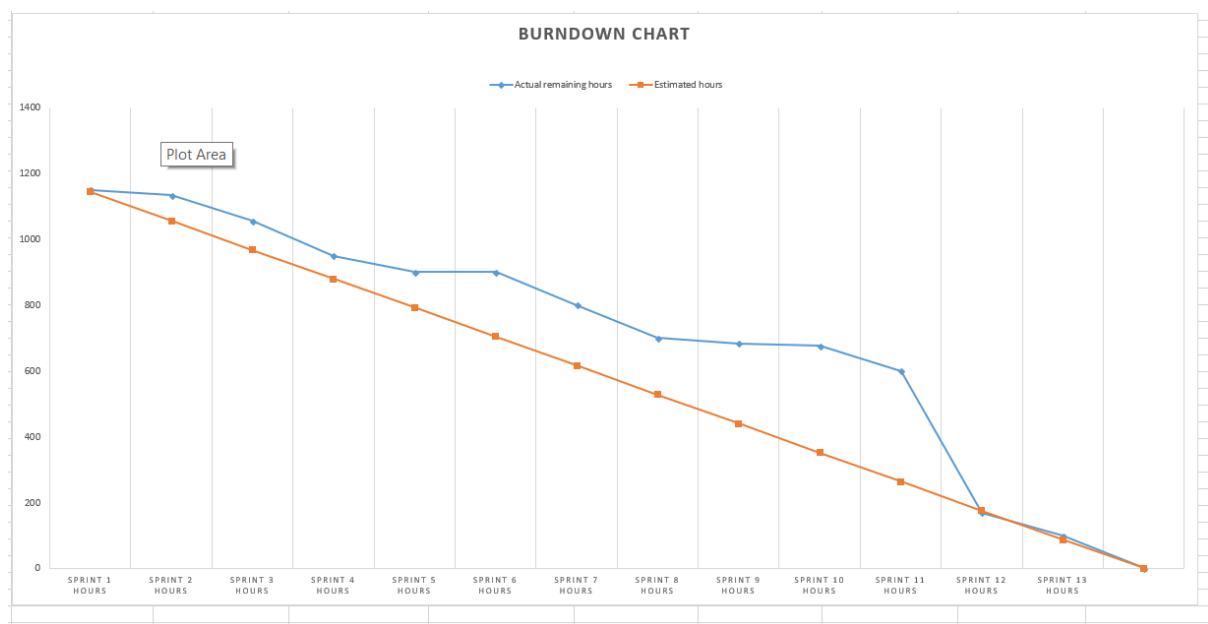
Books, online material and supervisor meetings proved to be a great help for the wellbeing of this project's work flow and contribute in the accomplishment of all the required tasks.

Also respecting the group contract, risk assessment document and attending the scheduled meetings resulted in a good atmosphere in the group and helped in completing the given tasks.

It is true that at certain points of the project there were tense moments due to the complexity of certain requirements and sometimes not agreeing with each other. At certain times, debaters took longer than expected regarding a certain step in the assignment, however they were constructive and were necessary so that each group member understands and is fully aware of what that step of the project meant and what was required to do.

Also, a Burndown Chart was made for this report. The chart proved to be an important tool for monitoring our progress and helped us keep track of our activities.

The following burn-down chart illustrating the progress in term of time, based on chart, our team were behind the schedule, due to wrong estimating hours, we were estimating less hour than actual, at some point which at sprint11 after critical meeting, a decision taken to make delimitation to meet the deadline.

*Figure 1 Burndown Chart*



# 6. Personal Reflections

In this section the project group reflects on their experience during the creation of the project.

Oskars Arajs

Each project that I take part in has something different to offer. In this one I had the chance to work with a few new people and get to know some other cultures better than before.

This project started off a bit different then SEP1. In this project I had the feeling that at least now my group has one hand on the wheel rather than both being tied up. I felt that now we were more in control and knew what to do and how to do it. We're meeting up at least two times a week, sometimes even three time if we feel that we are lacking in time and must make it up. My group is made up of 4 people and all of them contribute as much as they can, so I have the utmost respect for them and their work etiquette. Sometimes we argue but that is all part of being a team player and hearing other opinions. Everything we do, we first discuss so that all of us agree on what to do and how to do it. Otherwise someone ends up changing something and we end up with bad blood in our project team.

Mutual respect is essential in my opinion. And not just respect but also modesty. To be able to say, "I don't know that much about this topic, could you please help me?" There are a lot of times when other group members must jump in and help a friend out with their project assignment. At the end of the day it's a group project. Everyone must be able to work on their own as much as they work in a group.

And from what I've seen and experienced, my group is stronger and more productive when we are working together rather everyone by themselves. We can make our meetings professional and quite fun. All of us are fully aware that this is like a training lesson for when

we start our Bachelor project. So, the more work we put in these assignments the better our understanding will be on the 7$^{th}$ semester.

Taha Alzein

During this project I've realized that I like to work more with some people rather than others. This is mainly since some people contribute more than others on some subjects. But through hard work and perseverance we manage to meet all our deadlines and end up with a good grade to reflect our determination.

Most of my team is made from people I haven't worked with in the past and I thought that that could turn out to be a problem for such an important project, but as months passed it turned out that we all work well together. There is some conflict of how to do certain things in our project but that's just because everyone wants what's better for the group. But thanks to all the arguing we used more time than we should have, but that time wasn't wasted. Thanks to that we have a solid base on which to build our project and not worry about having made mistakes in the beginning of our project.

I didn't quite like that we were meeting for two times a week and staying in confined spaces because I'm more of a large free space kind of a person. When I'm in compact places, my mind and train of thought gets messy and I can't think straight if I must stay there for 8h. But the fact that I had a fun group helped a lot because most of the time it didn't feel like working since we were laughing a lot and telling jokes. But that's not to be taken as if we were light headed and only wanted to have fun. We worked hard, and we were professional as possible being only 2$^{nd}$ semester students.

The hardest part probably was to get everyone together on days when we didn't have classes. Since only one person in my team lives in Horsens the rest of us must think about how and when we are going to meet or that maybe we should all work from home.
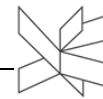
Muhammad Nadeem

I feel that this group and project is perfect for me since I feel at ease working with them. I feel I can trust them with important tasks and they won't disappoint the rest of the team. We had some issues on deciding what to do and how to do it. But, it helped a lot because we solved a lot of our problems before coding and designing.

In these few months I noticed that we are strong thinkers, but we need more practice implementing our ideas. It was said that if you know the theory you know the practice. It turned out that we should have just done things instead of spending multiple days discussing different things.

But that was only at the very beginning of the project. The group still was getting to know each other and probably didn't want to mess up and tried to be perfectionists.  Know that we all are comfortable in our group we can delegate the responsibilities to each other. We ended up working so well that we were able to give each member tasks that they excelled at. Like, I am good at designing and I understand a lot of java now. I feel that the rest of my team are more practical people and they enjoy doing things like coding and not so much of thinking of what are we going to do next time we meet.

But there are also good things like I had trouble with the new Java assignments, but thanks to the nature of the project I managed to catch up on my studies.  All my group mates are

reliable people and if I feel I have some issues they will come and help me. Since we try to do everything on our own and not ask for too much guidance from our supervisors.

Alexandru Vieru

Since the last project group, I had was an utter disappointment, I wanted to make it my mission to find the best of the best for this semester project.

And I found these four guys. They are good. We discuss things in a bit more detail then I would think is necessary but it's all for the best. We make mistakes, but we solve them as a group if one person can't handle it. We are full aware that one person does not a team make. We work to each's strengths and help each other were we can. The one issue I have is that I'm not so good at designing but I'm well covered in coding and implementing another people's design.

I think of myself as a team person but now I realize that I must work a bit on my communication skills. I get carried away with minor task and start to neglect parts of the project. But the rest of my team checks me on the little things and the lot of us get things done, not quickly, but surely and we finish everything on time.

In this project I found it most difficult to work with the database. But thanks to the help of my project group I'm starting to get the hang of it. I particularly didn't enjoy doing the documentation since its tedious work and takes a lot of time. I'm more of a java person and I think that that's one of my skill sets.

Fadi Dasus

Doing this project was so interesting since we have earned a lot of experiences and expertise regarding group work. I have improved my skills during this project and I learned so many things from my group members.

The resulted product earned my satisfaction, and we did our best to make the process filled with fun and entertainment besides the hard work. Definitely, this group work was much better than the first project, because we knew each other better from the first semester, and we knew how to use each other's strength sides.

Furthermore, we have learned how to use communication tools better, and I hope that we will continue improving our self in the next semesters.

Personally, I have enjoyed the work with all the guys in the group, and I am satisfied with our performance in this project as students in VIA. Moreover, supervisors were so helpful during the process, and they were ready to give a hand whenever we get stocked.

In my opinion, to have a good structure in our group we needed a good and respectable group contract. One that everyone would follow and respect so that we would have a guideline of what happens if you neglect your responsibilities and actions will be taken.

## 7. Supervision

Our supervisors were helpful. We arranged meetings to get advice on how to design our project and help us better understand the connections between classes and how the code should be implemented.

## 8. Conclusions

Through the course of this project we encountered challenges that put all our abilities to the test. Some tasks were easy to complete while others proved to be more difficult, however with the help of each other and our supervisors, we were able to overcome them and see our semester project done within the given period.

Thanks to the agile method used and the different tools at our disposal, the group managed to organize and plan each activity accordingly and thus save time and diminish stress levels.

Having our activities ordered and split helped in creating a good collaboration and a solid organizational backbone for our group.

Many hours have been spent for this report and at times this became exhausting but at the same time, this improved our skills in this line of work and made us better and stronger overall.

Tension arose between us at certain moments, but a full-on conflict never developed since all of us were fully aware that this aspect would prove to be toxic for the continuation of the project.

SCRUM was completely new to some of us but even, so it proved to be useful for our planning and made our lives much easier by implementing this as a management method.

The new design patterns learned this semester helped in producing a much more superior software than the one done in the previous semester since they were much more advanced than the one we knew before.

Database design and implementation also was a new topic to us and sometimes caused discomfort but overall helped us understand how our software would work in a real-world situation.

Overall all these factors contributed in producing a satisfying outcome and make us further improve in certain aspects of our craft.