

PROCESS REPORT

Students

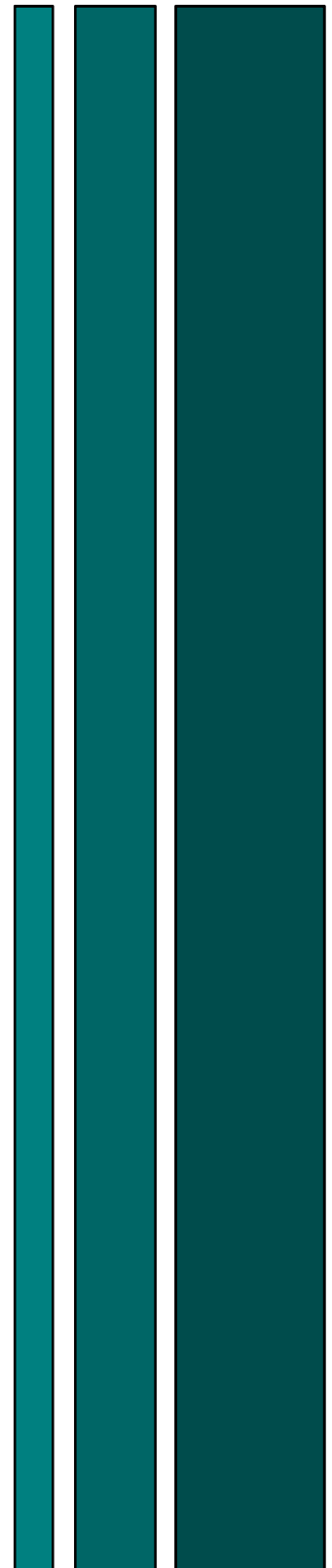
Flemming Vindelev	251398
Ionel-Cristinel Putinica	266123
Mihail Rumenov Kanchev	266106

Supervisors

Ib Havn
Joseph Chukwudi Okika
Knud Erik Rasmussen
Mona Wendel Andersen

Date

08-06-2018



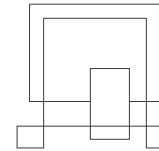
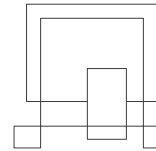


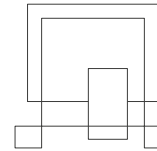
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Group Contract

Group Name: Group 1

Date: 8/02/2018

We agree as a team on these terms of group conduct and cooperation.

Participation: We agree to....

Have every person in the group participate equally.

Communication: We agree to...

Give each other feedback and always share our opinions no matter how silly we think they are.

Meetings: We agree to....

Have occasional meetings and give each other a heads up if we are late or unable to attend a meeting.

Conduct: We agree to....

Respect one another and listen to each other's opinions.

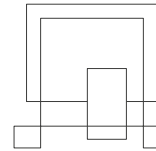
Conflict: We agree to....

Solve our issues by having a mature discussion instead of arguing.

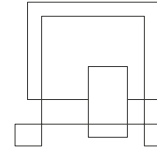
Deadlines: We agree to....

Respect all the deadlines and communicate if we encounter any obstacles.

SEP2Z Process Report – Group 1



Group Member's Name	Student number	Signature
Flemming Vindelev	251398	
Ionel-Cristinel Putinica	266123	
Mihail Rumenov Kanchev	266106	



Group Description

To see a more in-depth group description, see appendix 9.

Flemming Vindelev

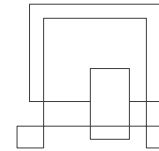
The name is Vindelev, Flemming Vindelev. I am a 21-year-old Dane, who wants to become a software developer someday. I am usually very introvert but thanks to some amazing people I am slowly gaining more confidence, which also makes me want to talk to more people. I dislike aiming too big, since that often can bring disappointment over satisfaction. It is about knowing your limits and slowly increasing these limits over time, to better yourself as a person.

Ionel-Cristinel Putinica

I consider myself as an open-minded person that is always open to suggestions and any kind of feedback, because I am fully aware that I have a lot more to learn about everything, and I consider that criticism is the best way to better yourself. Most of the times, when I want to do something, if I consider that something as being important for me, I will fully commit myself. Usually spending as much time as needed to get to a result that is as good as it can be, and I consider this as being a quality but also as being a defect, because a lot of times I spend too much on details just to perfect them. I am more of a group-work person, because, when I do something, I usually want the feedback from at least another person as well, just so I can make sure that the product of my work is one of high-quality.

Mihail Rumenov Kanchev

I am a natural leader. Although I don't find enjoyment in the responsibilities coming with the leadership role I tend to take control over chaotic situations. I am a visual learner and although I come from a mainly high-context culture, my character had developed into a low-context communicator. I am direct, strict and disciplined. I trust team members and expect the same trust in return. I take every new presented idea as an opportunity of improvement. Creativity is my main trait, that is why I tend to focus more on the technical roles in order to gain more experience overall.



Considerations before the Project

Flemming Vindelev

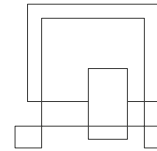
I think this project will be smoother than the last one, considering that we have learned many things since last semester. We are more prepared for how a project period feels, and we are coming into it with the same group we had last semester. This means there will be no surprises in how we are and how we work, as well as the cultural differences. I am expecting to do just as good this time around, as we did last time as a group. In addition, personally I am expecting to learn many new things, since it is a goal of mine to do more programming in the project since I did not get to do a lot of programming last semester.

Ionel-Cristinel Putinica

I have high expectations from SEP2. One of the main ones is that I will develop my programming skills, but I would also like to learn a lot more about working as a group. One of my main goals will be to fully dedicate myself to the project, putting as many hours as necessary into it and living any other activities aside until I consider that the project meets my expectations and my group's. I do not expect that the whole experience will come without any challenges, but I see this as a good thing, because the best way to learn something is by solving a problem, and I am fully committed to deal with any difficulty that might arise.

Mihail Rumenov Kanchev

I expect this project to develop my professional skills to a point, where I can be comfortable being deployed in a professional environment. I expect a deeper understanding of all the topics from SDJ2 and DBS1. Taking the project as an opportunity to test everything learned in SWE, I presume that I can easily solidify everything learned in this semester. Considering the group work and the use of new techniques, I expect to experience Scrum from a first person perspective and combine it with everything learned through SEP1. I hope that by the end of the project, I would be perfectly comfortable with Unified process and Scrum.



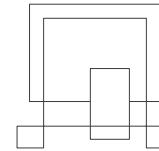
Unified Process

Inception

The inception part of the unified process is where those who want to work on a given project decides if it is worth it. In our case, money does not play any role since it is a school project. Therefore, we have to look at other factors, like time. Is it worth starting this project considering the amount of time we have, which we concluded that it is.

Another thing is if there already exist something like the project we want to create. It turns out there is, but this does not come as a shock to any of us. That is exactly the reason we wanted to do this project, to create a *better* version of something that already exist.

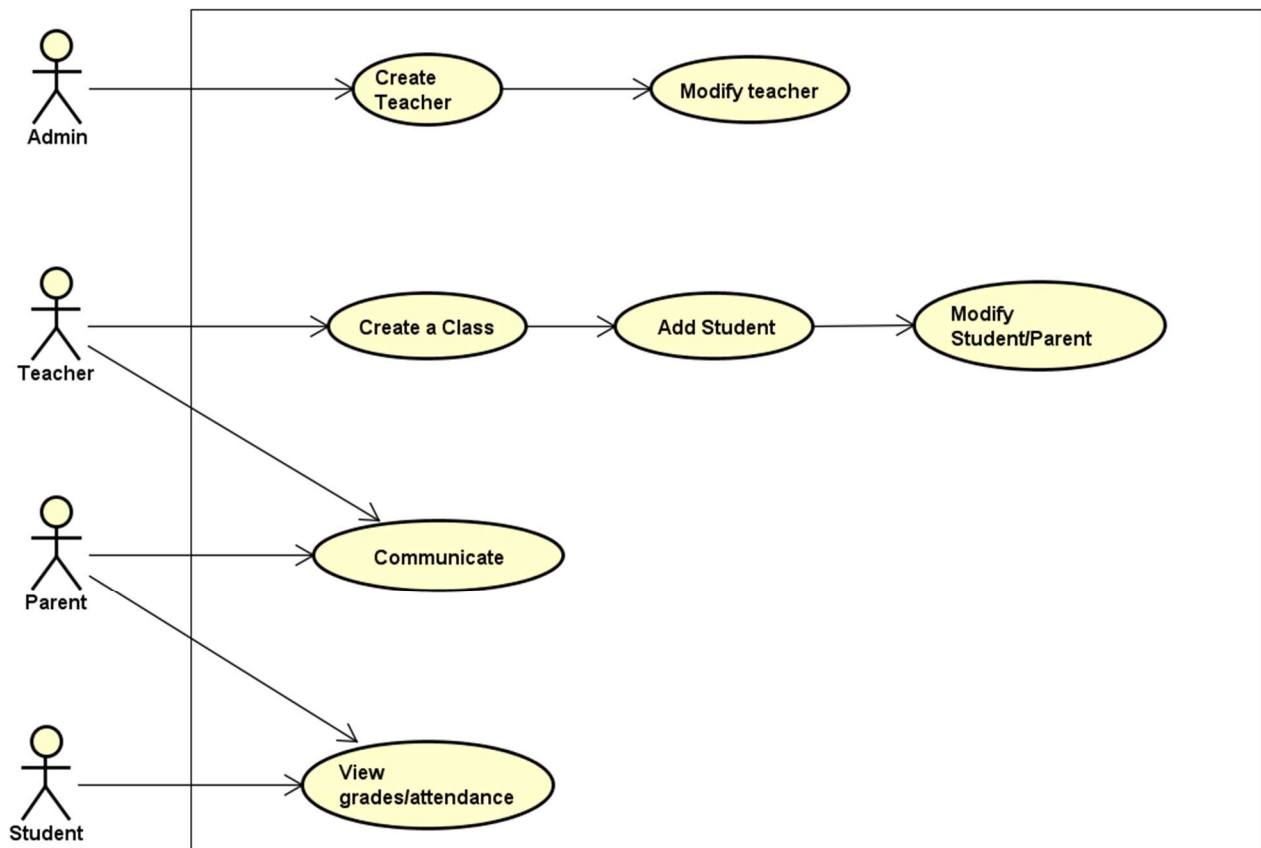
The vision of the project is to create an electronic school/class book. However, unlike a lot of those that already exists this project will have focus on the communication between home and school (teacher and parent). This is described more in depth in the project description. So, should we proceed or stop? At this point, there is no immediate reason to stop, and so the work began.

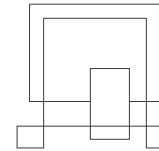


Artefacts

Use Case Model

Below the last iteration of the use case model is shown. The use case model is a way to show how the users want to interact with the system. As your requirements expand so should your use case model, since this is the connection between features and the users.





Supplementary Specifications

In this part the final iteration of the non-functional requirements are listed, these are requirements which is not *about* the system, but more *how* the system is made. One could call them limitations instead of requirements.

Non-Functional Requirements

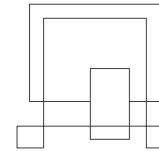
1. System must be maintainable and easy to update.
2. System must store data into a Database.
3. System will use Client-Server connection of type RMI.
4. System will use CPR number as a login.
5. System will use connection of type LAN.
6. System will be coded in Java and SQL.
7. System will not include a live-chat feature.

Risk List & Management

Lack of Constant Verification

Without the regular check-ups and validation from the supervisors at every step of the way, such as the ones in SEP1, it is naturally more likely for teams to feel more insecure or unsure about specific aspects about the project. It is possible the group might be hindered by specific tasks that the supervisors are not allowed to offer guidance through or tasks that are not validated at all before the final project hand-in. This could cause frustration amongst the group members, as well as periods of possible unproductivity and demotivation.

If this should become an issue, to solve it the team could arrange more meetings with the supervisors. The team could even seek help or meetings with other groups and students, to get some feedback or help from them.



Personal events:

Personal dealings differ from person to person and considering the group consist of four members, that can come as an issue. Unexpected job callings can occur and interrupt a scheduled meeting or postpone an assigned task. Three out of four members are not from Denmark, therefore the project will slow down during holiday periods as a consequence of traveling. As a result of bad weather, some members might get sick and be unable to work on the project for a certain amount of time. Family business and spouses have a chance of delaying the process of work.

Personal events is something that can be difficult to *fix*. Especially since it is a topic that can vary a lot and the affected person could be emotionally affected as well. To counter this problem the only/best thing the team can do, is to talk a lot to the affected person. The team can also make sure the person are doing all right, in short show a lot of compassion.

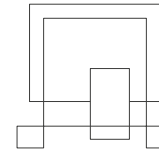
Time Schedule

A time schedule can help any kind of project or group work for the better. However, there is such a thing as a bad time schedule. Which will only hinder the project and make it harder to progress. There is also the possibility of not having fulfilled or followed the schedule, which again will only give problems. Making a proper schedule and following it is the ideal way of making a project. When making a time schedule it is also important to document if things are finished in time or not.

In reality, a bad time schedule is almost impossible to fix before it is too late. However, if the team realises there is a problem with the schedule action must be taken immediately. The team will have to reconsider the schedule, in a way that minimizes the chance of such thing happening again.

Elaboration

The elaboration phase in an iteration is where we improve on the information we gathered while in the inception phase. This phase is where the system is designed which means we create models like domain model, design model and UI prototypes. However, since these models tends to be larger they will not be shown here. But to see them and read more about them, see the project report.



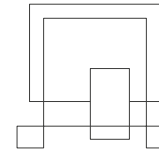
Scrum

Artefacts

Product Backlog

The features of the application have been written from the perspective of the end user, therefore, these are known as user stories. The collection of all the user stories has been put together into the Product Backlog. The product backlog consists in a prioritized list of items, where each item has an ID, a priority level (critical, high, medium, low) and a time estimate.

ID	Priority	Case	Estimated hours
1	Critical	As a User, I want to access the system from different computers.	158
2	High	As an Admin, I want to input teachers, so I can store them reliably.	38
3	High	As a Teacher, I want to create a class in order to have constant access to my students.	41
4	High	As a Teacher, I want to add, remove and modify the students in my class.	12
5	High	As an Admin, I want to be able to modify or delete existing teachers and classes.	12
6	Medium	As a Parent, I want to be able to see my child's grades.	4
7	Medium	As a Student, I want to be able to see my grades and attendance of different subjects in school.	4
8	Low	As a User, I want my account to be secure.	18
9	Low	As a Teacher, I want to be able to contact my pupil's parents.	5
10	Low	As a Parent, I want to be able to contract the teacher of my child through the system.	3

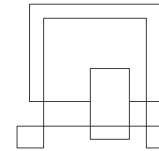


Sprint Backlog

The Sprint Backlog consists in a list of tasks. Items (features) have been taken from the Product Backlog and have been divided into smaller tasks. Each of the tasks has a Product Backlog ID, a time estimate, the name of the team member that is responsible for the task and also a status (not started, in progress, done).

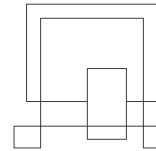
SPRINT 1			
PB-ID	SPRINT-ID	Task title	Estimate hours
1	1	Design Client MVC, Server patterns(Flyweight, Singleton and Proxy) and core classes of all the data stored in server	21
1	2	Update Use Cases and Activity Diagrams	8
1	3	Make Use Case descriptions	6
1	4	Implement and Test server – client connection, Showcase remote method calls on data from client to server (Demo)	23

SPRINT 2			
PB-ID	SPRINT-ID	Task title	Estimate hours
1	1	Implement and test server patterns and import model classes into client Model	23
1	2	Design client Model	15
2	3	Design and implement Admin GUI	8
3	4	Design and implement Create Class GUI	3
4	5	Design and implement Teacher GUI	12
8	6	Design the log-in and implement the GUI	3
8	7	Discuss all the created GUI and showcase it to the customer(Demo)	5



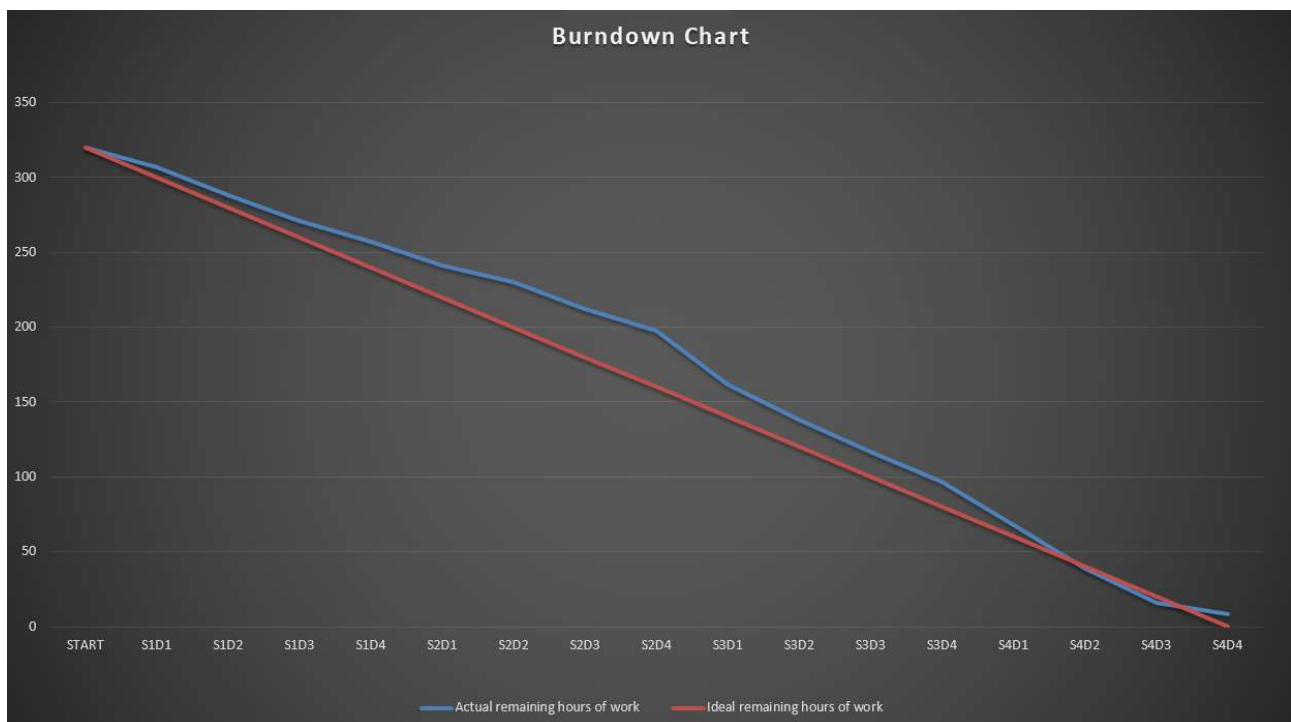
SPRINT 3			
PB-ID	SPRINT-ID	Task title	Estimate hours
5	1	Finish implementing Admin GUI	12
6	2	Design and Implement Parent GUI	2
7	3	Design and Implement Student GUI	2
2	4	Implement Client controller as well as Admin GUI functionality	30
3	5	Implement Teacher GUI functionality	38
1	6	Design and implement the Database	27
1	7	Design and implement Adapter pattern in server side then establish a server-database connection	6
8	8	Implement a working log-in system	10
1	9	Black box testing of Admin and Teacher account functionality as well as log- in system test	3
1	10	Test server – client connection, design transfer of data, implement transfer of data	5
1	11	Black box testing of client log- in using server data	2

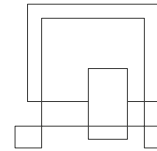
SPRINT 4			
PB-ID	SPRINT-ID	Task title	Estimate hours
1	1	Server – Client connection bug fixing	15
7	2	Student account functionality implementation	2
6	3	Parent account functionality implementation	2
1	4	Black box testing of data transfer from the database to the client	4
9	5	Design message function	5
10	6	Update use case descriptions	3



Burndown chart

The burndown chart has been used to ensure that the product is progressing smoothly. It provides a day-by-day measure of the amount of work that remains in a given sprint. By using the burndown chart, it has been insured that the development process is on the right track and helped making the right adjustments to the process of work.





Roles

Product Owner

The product owner has to make sure that the right features made it into the Product Backlog. He prioritized the items of the Product Backlog and has played an active role in the Sprint Review meetings and communicated the requirements to the team.

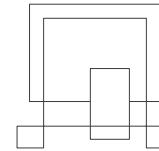
In our project, we chose Mihail to be the product owner. This decision was based on his Belbin roles, which is plant and coordinator. As the product owner Mihail got to take on somewhat of a leadership role, which he enjoys. In addition, since there is no customer he could decide on many things by himself. This gave him somewhat of a leader role, without the responsibility which he dislikes. Mihail has this to say about himself:

“

Coordinator: When taking on a challenge, I tend to visualize (by time schedules or graphs) all the goals on the way. I never start a task without having a visual plan of what I need to do.

Plant: When encountering a problem, I tend to think outside the box and solve the problem quickly and efficiently. If a logical problem in my code occurs, I break focus and change my way of thought, which makes finding a solution easier. ”

To read more about Mihail and the rest of the group, see appendix 1.



Scrum Master

The role of the Scrum Master is to ensure that the sprints go as planned as well as that every member of the team has all the tools they need to accomplish their tasks. He schedules meetings and helps the Product Owner make the Product Backlog.

Initially, our Scrum Master was Miruna, but after some previously predicted difficulties, she left the group. Ultimately, Flemming was chosen as a replacement for Miruna, who has the Belbin roles shaper, implementer and team worker. He tried to adapt quickly and started to take control of the daily scrum meetings. Flemming has this to say about himself:

“ *Shaper: Throughout my life, I have had a hard time working with people, mainly because I am easy to annoy. Which usually results in me getting aggressive, I have however learned to control my temper a lot more over the time.*

Implementer: I usually like to do things the way I learn them, so whenever someone shows me a new way of doing things, i will have a hard time relearning it.

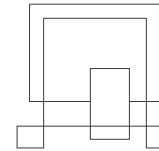
Team Worker: We had a few problems as a group, I made sure to listen to what everyone had to say. Whereafter i proposed a solution that made everyone happy. ”

If you want to read more about Flemming or the rest of the group, see appendix 1.

Scrum Team

The Scrum Team takes the responsibility of producing a product that fits a customer's requirements.

Since this project had to be done in groups of four and in our case a group of three, there have been certain limitations for the group as a whole. This means that our scrum team consists of all the group members, including the product owner and the scrum master. Eventually the core concept of Scrum stays the same aside from some inclusions of extra responsibilities assigned to the Scrum Master and the Product Owner.



Ceremonies

Sprint Planning

Sprint Planning were the meetings where the Product Owner, Scrum Master and the team discussed the top-priority features, to determine what has to go into the next Sprint, the output of one of these meetings being a Sprint Backlog.

At the beginning of every sprint our Scrum group gathered along with the Scrum master and the Product owner then discussed the Product backlog. Features from the backlog were chosen by the Product owner, with their priority and time estimate taken in consideration. The group discussed the picked features and decided on how they are going to design and implement them (responsibilities, potential problems). Ultimately the sprint was further discussed as a reassurance that every Scrum team member envisions it the same way.

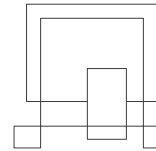
The group effectively used planning to cover the different weaknesses of its group members and predict complications in the sprint progress.

Sprint Review

In the Sprint Review, the team showcased the work to the Product Owner and also decided on what to do next, thus providing valuable input for the next Sprint Planning.

Sprint review was done at the end of every sprint, where the implemented features were presented to the whole team in a form of a visualized Demo (sometimes taking the form of a test). After the presentation, the whole Scrum team decides if the completed features of the Sprint fit the expected criteria and ultimately the Product owner makes the final call.

Our second sprint went chaotically, where the Product owner disagreed with the presented solution and extended the effective work put in the third sprint.



Sprint Retrospective

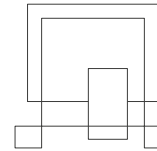
In the Sprint Retrospectives, the team has discussed what went well in the Sprint, what could have been improved and how the next Sprint can be improved.

At the end of the final sprint the group gathered together and along with the Scrum master discussed their reflections on the working process and overall Scrum effectiveness. Every member expressed his opinion on the methods used for problem solving, types of communication, the sprint time schedule structure and how he/she thinks the team can improve with the next Sprint. For our group specifically it was decided that more emphasis should be put on testing and lesser emphasis on implementation, as well as better alternatives for communication should be used.

Daily Scrum Meetings

In each Daily Scrum Meeting, all members of the team took turns and talked about what worked they've completed since the last daily meeting, what they were planning to do next and also if there are going to be any issues in accomplishing their next tasks.

The group held daily Scrum meetings and used them as a method to communicate and follow each others progress. Each member explained the work he did the day before, the complications he had with it and their potential solutions. After the Scrum master had made sure that everybody progresses effectively, the Scrum group decides on and splits the daily responsibilities to its members. After the group has a clear goal, they begin working on their personally assigned tasks.



Considerations after the Project

Flemming Vindelev

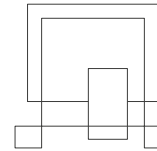
This project suddenly turned itself upside down. After having a member leaving midway through the project, we saw ourselves facing a project designed to be made by four persons, while only being three persons to finish it. This drastically changed many things for all of us, but it also gave us the experience of how real pressure feels like. It gave us an opportunity to improve individually and as a group, in many areas not anticipated before the project. Overall, I feel like we did a great job, it was not perfect but we managed. However, looking away from that, I feel like I improved in the areas I wanted to improve. I have definitely gained a lot from this project.

Ionel-Cristinel Putinica

I feel that, SEP2, as an overall experience, was a step-forward for me and it has helped me boost all my knowledge regarding my programming, time management and academic writing skills. This project has proven me, once again, that great results are much easier to achieve in group work rather than in individual work: it's a lot easier to come up with good ideas, put them together and implement them. One last thing that I would like to mention is that SEP2 has offered me the opportunity to develop my ability of working in an international environment. And that to ask for an advice from someone for solving a problem is never a shame, but rather a thing that everyone should do when they can't manage to come with a good solution to a problem by themselves.

Mihail Rumenov Kanchev

The project turn of events was unexpected but fully under control. The inconveniences we had helped me and the team bond and depend more on one another. I am happy that things went the wrong way, because our team was put right into the storm and tested to its full capabilities. Scrum was fully utilized and provided me with enough experience to safely deploy it in my future projects. The bug fixes and the testing combined, strengthened my confidence with everything learned in SDJ2 as well as DBS1. I am proud with everything done and I hope our stream of hard work was utilized correctly.



Supervisor Meetings

Meeting 1

Date:

Thursday 08/03/2018

Description:

Project Description approval

Supervisors:

Mona

Joseph

Ib

Meeting 2

Date:

Tuesday 29/05/2018

Description:

Project content changes after group reconstruction

Changing SCRUM roles

Supervisors:

Mona

Meeting 3

Date:

Tuesday 29/05/2018

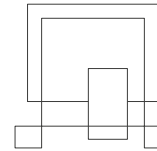
Description:

Discussion over patterns

Patterns testing

Supervisors:

Steffen



Meeting 4

Date:

Thursday 31/05/2018

Description:

Implementation supervision

Supervisors:

Joseph

Meeting 5

Date:

Thursday 31/05/2018

Description:

Documentation clarification

Supervisors:

Steffen

Meeting 6

Date:

Monday 04/06/2018

Description:

Bug fixing

Supervisors:

Steffen

Meeting 7

Date:

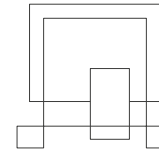
Wednesday 06.06.2018

Description:

Technical difficulties

Supervisors:

Joseph



Sources of Information

Journal of Education and Practice, 2015, Vol.6, No.27, “Early Childhood Behavior Changing in Terms of Communication between Parents and Teachers” Available at: <https://files-eric-ed-gov.ez-aaa.statsbiblioteket.dk:12048/fulltext/EJ1077393.pdf> [Accessed March 04, 2018]

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