

Process analysis P1-project

Group B205

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Introduction

1

The process analysis is an analysis where we think back and look at the work we have done in this project. The analysis is made to show how it was to work in a group like this. What was good, what was bad, did we need this, why/why not, and what could we have done instead. This process analyse will be used to reflect over the project and take the good things we have learned with us for future project work. Through the chapters in the process analyse good tools and work method will be described.

Projectplanning 2

The first section in this chapter is about how the work in the group was administrated, and the work of the group coordinator. The second section is about how the work in the group was coordinated, and the next about our time schedule. Next is about the log book and why we wrote it and what it was used for in the project. Last section is about how decisions were made in the group. We want to be better to see our strengths and weaknesses and use them into the project. It is demanded that we gain the ability to work as a group and not as individuals in a group. We can do that by making a plan for how the project needs to be done.

2.1 Administration

In this project we decided to make a better distribution of our work. For that we needed some roles and someone to be the coordinator to have the general overview so he can guide our group and make sure that we reach our goals within the time limit. When we really had a lot of different things to do at the same time then the coordinator assigned two secondary coordinators to help keep the general overview. This form of administration builds on mutual trust, because when someone is done with their work they have to tell the coordinator, so he can mark the work as done and give them something else to do. It is then the coordinator's responsibility to give them something that is relevant to their skills and if they say they cannot do it, then he has to find something else for them. All in all we believe that this method worked very well. We worked focused, most of the time, when we got an assignment. With the coordinator scheduling our work effectively we had time to spare and still met our deadlines.

2.2 Work Coordinating

The time schedule has been the essential tool for the coordination of the group. The group coordinator managed the time schedule, and had the overview of the tasks. Everyone could see the time schedule, but the coordinator managed it. This resulted in that there were a person with the general overview, and could hand out tasks to group members. This made sure every task were taken, and no one worked on the same task as another.

We will in future projects still have a group coordinator. We found it very useful in this project, and it worked very well for us. This will ensure that future projects will have the same overview and control of the time as we had in this project.

2.3 Time Schedule

We figured out early in the project that it was necessary with a time schedule to gain control of the project, and to make it easier to get a general overview of how far we were with the individual chapters. We made the schedule with Microsoft Project, which worked fine for this project. The tool is not essential, but it is essential to have some sort of tool. The original time schedule can be seen on Figure B.1 in Appendix B. There have been several changes in the time schedule since, but usually we abided by the timetable. The problem analysis was a bigger and more time consuming job than we first thought, so the time schedule was changed there. We will take this knowledge with us to P2, and set more time to make the problem analysis. The time schedule on Figure B.1 list the points on the time schedule, but does not give an overview of the time relation of the point. To do this, we use a Gantt diagram. A Gantt diagram displays the tasks in a visual diagram, with the horizontal line as dates of the period. This gives an overview of the length of the task, when they have to start and when to finish. The Gantt diagram of the time schedule can be seen on Figure B.2.

For future projects, we will certainly still make a time schedule, so we can control the process of the project, and use the correct time for each task. It will ensure, that we will not lack behind, and we will finish the report in right time. We will still use Microsoft Project, because it can show both the normal time schedule and Gantt diagram.

2.4 Logbook

In this project we have kept a log book to keep track of what we did when, and why. It is generally a tool to save our thoughts for later, so we can reflect on our actions and choices at the end of the project. Keeping a log book makes sure we can remember all we have done and thought throughout the project, as long as those thoughts were written down of course. This in turn helped us keep our mind on what mattered instead of having to reflect on our choice after each decision which would be pretty redundant. Because we have not distanced ourselves from the choice, we would still think the same and might not see other alternatives or not see it from a different perspective. Of course if the log book is not written very well then reflecting on its content can prove to be difficult at best. Furthermore by reading the log book through the project a greater perspective on what needs to be done can be gained and be written into the time schedule. Despite its functions we chose to solely use the time schedule as the check-list to see if people had done their work. Even though we have not really used the log book we still think its a good idea to still make one each time, if we ever need to look back on our previous works.

2.5 Decision Making

An important part of the project is the decision making and how we handle the whole project process. The decision making is important because it is when the group have to come together and discuss where they want their project to go and how the product should be formed, what should be included and what should be changed. Therefore it is an important part of the project process and that the project group understood its meaning and why it is big part of the project. Every major decision was made by the group coming together and discussing among themselves whether it was the right direction or not for the project. There was not one single group member that took all the decision by him/herself but it was the group with minimum 5 group members attending the meeting. This minimum limit was made so it was possible to make decisions if one or more persons

were sick or could not attend the meeting. This model for decision making has been used in this project and it has worked fine. We think this method is one of the best suited for the project work and working in a group in general. When using this method we found it useful to have an agenda manager, so the meeting was structured. The agenda manager also managed the order of who and when people was talking, so it was possible to have a proper conversation.

Group Work 3

The work effort in this group has been very high. Everyone has, in general, done what they could for this project, and it could not have been done without a good group leader that motivated the rest of the group to work. The group had a high working morale. Monday-Friday the group met from 9:10-16:15 and worked very efficient. It was so effective that it was not necessary to work in the weekends which had a good result Monday morning. Almost no one was not too tired to work Monday morning (and if they were, they could not blame it on the project).

Generally in the group there was a very good team spirit and everyone participated. No one was standing in the corner doing nothing. The point with this chapter is to reflect on our group work throughout the project to see what we did and what we might do different.

3.1 Values and Visions of the Group Collaboration

The visions in the group regarding collaboration in the group, is that each group member should have a nice experience with this project, and to come out with a nice product, as a solution to our problem.

3.2 Group Contract

In the beginning of the project we made a group contract which can be seen on appendix A. The contract consists of rules the group has agreed upon. In our group we agreed that if we did not show up to lectures, arrived late to an appointed time or did not keep a promise without calling in advance a mild form of punishment would be given. This punishment usually resulted in some form of compensation, for instance cake or something similar, to the group. This was meant to be a motivator for everyone in the group to meet on time or at least call. Other things we agreed upon was which programs to use and who had certain roles like coordinator or reporter. Furthermore we had chosen Friday to be the day we had a meeting in the morning to discuss how far we had gotten and what, if any, needed to be done in the weekend. If the day was blocked by lectures then we had the meeting Thursday morning instead.

Our general opinion of our group contract is that it have worked quite well. At first when we did not know each other very well, it gave us a baseline from which to shape our work day and work expectations. At first it was agreed upon that we worked from 9:20 to 16:15 each day. As we got to know each other we agreed to let those who wanted to work

at home do so after 14:00. Though we were still enforcing the punishment if you were late and did not call in advance. We think our group contract was very good and we cannot find big changes we want to make in the future.

3.3 Division of Roles

In one of the first PV lectures and the P0 course, we learned that it was a good idea to divide roles among all group members. P0 was the first project that was meant to give the students an idea of the processes in the project. Through the P0 course we experienced that it is important for a group to have solid roles in the project or the whole process can be chaotic and cause unnecessary stress. PV lectures gave us some tools and exercises to develop an understand of the different group members personal preferences and what roles that would best fit the individuals. One of the given tools was a test that the group could take and see what different people would be good at. Through the result of from the test we found what fields the group's members where strong in and thereby an overview of the fields that were not represented.

There were a certain amount of important roles that we thought were needed for the group to work as a team and get a good flow in the teamwork. The important roles where project leader, coordinator, agenda manager, reporter, conflict solving team, and a supervisor contact person. The roles were given to those who wanted it and thought they could fulfill the role. The project leader and coordinator is the most important of the six roles because it was the role that would have the big picture of the project and would know what was to be done. The coordinator had task to keep the time schedule updated through the project so the other group members would have a chance to follow the progress. The agenda manager and reporter roles were made for the purpose to control and make a summary of the meetings with the supervisors so the meeting would be optimized. The supervisor contact person took care of all the communication with the supervisor outside the meetings. To solve and prevent conflict within the project group there was the conflict solving team (also called Conflict Emergency Team - CET) was made. What they should solve would be problems/conflicts within the group, the team consisted of three members from the group. We chose three because should two from the CET get in a conflict the last one would have to solve it.

The roles were first based on the result of the tests but we allowed members to decide by themselves if they wanted the role or not. The reason for this method was because we meant that the test results were objective and therefore the given individual might not find themselves be fitting the given role. We would like to keep these roles, although we think that the agenda manager should be a part of the group leader. We feel the roles are important, so that we each know what should be handled by who.

3.4 The Meeting Culture

We set some guidelines for the group's meeting times in the beginning of the project that said: If there was no lecture in the morning (else 8:15), we agreed to meet at 9:10. The day ended at 16:15, as the latest. We could, if the group agreed, leave at 14:00. If we did not meet on time there would be a punishment (see Appendix A).

3.4.1 Morning Meetings

Each day before beginning to work on the project a meeting was held, where each member of the group tells what he (or she) has been working with, and are going to work on. If a person does not have something to work with, the person will then get something to do. These meetings are short and help to get an overview over the project, and to see if the schedule is being held, which is good for the teamwork in the group, because it helps the members see progress in the project which motivates the group.

3.4.2 Friday Meetings

At the weekly meeting (normally held at Friday) we had an agenda which we followed slavishly which was very important, otherwise it would be a meeting without sense. The agenda is as follows:

1. Purpose: First thing that happen is to discussions purpose of the meeting. So all members of the group knows what the purpose of the meeting is.
2. Acceptance:
Can the standard agenda be used at the meeting or does it need to be modified.
3. Status:
Then the status of the whole group is gone through, to see where the group is in the project.
4. Teamwork and planning:
Here the cooperation of the group is evaluated and planning for the future is made.
5. Worksheet:
Here it is discussed what is going to be in the worksheet, which is going to be sent to the supervisors and sub-supervisors. The persons who are to put the worksheet together is also chosen here.
6. What happens next?:
Thereafter each members of the group is telling what he (or she) is going to work with.
7. A.O.B:
If there is something there needs to be talked about it happens at this point.
8. Next meeting:
The date for the next meeting is decided.
9. Evaluation:
And the last thing at the meeting is to evaluating the meeting in the group.

This meeting helps the group the same way the morning meetings help. We do not have these meetings each morning but a short meetings is held each morning.

The way we have made the meetings is to make an overview over the project, to help hand out tasks to each member, find out what the supervisors and secondary supervisors

needs to have and take the things up to discussion that need to be discussed. Therefore the meetings we have held is good for the amount of time for the project. But when we have a half a year to make a project, we might hold fewer morning meetings. Perhaps every third day or maybe even not have the morning meetings and then only have the Friday meetings.

3.5 Summary of Group Meetings

We write summaries when there are important meetings like the Friday's meeting and when the supervisor is here to help us. This help us to remember important choices to the future, and so if one of the members is ill at the day where there had been made an important choice, the person can read the summary of the meeting and get info of what happened at the specific meeting.

The way the summary is made is that a reporter writes the summary during the meeting. The summary is made by using the agenda list and only type keywords and short lines to the points on the list.

Making a summery at the important meetings is a very good idea, because everyone can look back any time to find out what has been talked about on a given meeting.

3.6 The OBH-model

OBH stands for "overblik, beslutning og handling", which means overview, decision and action. We use the OBH model because it is very important to have a overview of the project. If you do not have the overview, you can easily feel like the project is overwhelming, which is demotivating. An overview of the project on the other hand is very motivating. In our group the structure of the folders helped us generate an overview. This way we could see which parts of the project was in progress, which where to be written, and which parts that were done. In the beginning of the project we chose a group leader. The group leader's role is to decide who writes each parts of the project, and to maintain the time schedule. The rest of the group took action, and wrote the parts they where given by the group leader.

Collaboration with Supervisors 4

The first section of this chapter is about the values, visions and professional contact with the supervisors. The second section is about the meetings with the supervisors, what was discussed and how often they were held. The third section is about the agenda and why we had one. The next section is about the summary and why we made it. The last section is about the supervisor typology and describes the supervisor and the secondary supervisor and how our cooperation was.

4.1 Values, Visions and Professional Contact

The vision with the collaboration with our supervisor, was that we should have a meeting each week, where he would comment on our progress. This has helped us greatly to stay on the right track. We also had a meeting with our secondary supervisor almost every week, where she would comment on the progress of the contextual of our report. Again, this helped us stay on the right track. Our vision is to have a good relationship with our supervisors. We also hoped that our supervisors gave us useful and constructive feedback to our report that could help us make a better one.

4.2 Meetings

The group had a meeting with the supervisor every week where the groups current progress were presented and it was discussed where the project should be heading from where it was. A worksheet was sent to the supervisor before the meeting, and he then brought a commented vision of it with him to the meeting. The group had meetings with the secondary supervisor when needed, and the meetings were arranged by email. The meeting were held at least every two weeks. On this meeting the groups progress were again presented and it was discussed where the project should be heading but with focus on the the contextual part instead of the technical part. The meeting with the supervisor every week was a very good idea, because the group was at all time sure to be on the right track. The idea that the meetings with the secondary supervisor were only held when needed, was a very good idea so the group and the secondary supervisor did not waste time on meetings where the group had no questions to the secondary supervisor.

4.3 Supervisor Typology

In this project there have been two supervisors, a main supervisor and a secondary supervisor. The main supervisor was used for the technical part of this project regarding the product and the documentation of the product in the report. The main supervisor have also been good at pointing out how the technical parts really should look like and how we should do it. The secondary supervisor functioned as a helper to the contextual and problem analysis. The secondary supervisor has also helped us to document the problem and structure the related chapters in the report. They both have been good at pointing out sentences or parts of the report that did not make any sense and should be redone and added some to. We had made an arrangement with the supervisors that we should send the material we wished the supervisors to read and comment on. The material should be sent a day or two at minimum before the meeting with the supervisors.

At the meeting we would talk with the supervisors about what we have made since last time we met and how the project work have been done. Then the supervisor would talk about their comments and what they think we should have made different, small errors etc. It has been great to have two supervisors but next project and the ones after that, we will only have one supervisor. The reason we had two supervisors was to help getting started at the project process and give us an idea of the project process. Next project we only get one supervisor that will help with the technical parts of the report and the product. We think that one supervisor will be enough for the next project now that we know how the project proceeds and therefore does not need a secondary supervisor.

Process of Learning 5

The first section in this chapter is about the values and visions for our learning process. The second section is about the goals for this semester, what we have done to reach the goals and if we did reach them. The third section is about problem based solving, what it is and what we think about working that way. The next section is about responsibility for own learning/mutual responsibility for learning, how the group handled this and the agreements in the group about it. Then comes a section about learning styles and how our work environment was during the project. After this comes a section about how we shared our knowledge with is other using for example SVN to share our work. The last section is about Blooms Taxonomy, what it is and how we have used it.

5.1 Values and Visions of the Learning Process

The visions of the learning process is to help us determine our individual roles in the group. We used Adizes test to determine our roles. This helped us further in the group work, because we each knew our roles, and thereby also knew what we each should be working on. Our vision for the learning process is to find a way to tackle the problem in the best way possible and to relate our problem to society.

5.2 Goals of This Semester

There have been set some goals of this semester, which are meant to be met through this semester:

Knowledge:

- Understand and explain theories and methods used in the project's analysis of the chosen issue.
- Especially understand and explain notions within programming and modelling which have been used in the project.
- Understand and explain the project's contextual relations

Skills:

- Choose, describe, and use one of the PV-course's suggested methods for organizing the group work and solution to possible conflicts in the group.

- Use notions and tools for problem based project work and reflect on writing about the problem based learning in context of the project.
- Disseminate the results of the project's work- and process results in a structural and comprehensible way, both in writing/graphical and verbally.

Competencies:

- Analyse an issue within software and within this issue formulate a problem where programming will be involved as a part of the solution.
- Develop a model of the issue.
- Include relevant notions and methods to analysis and estimation of the project's solutions in relation to the problem's context.

The point with all these goals is to gain a better understanding with the project that just has been completed. To understand what we have learned and see what could have been done better.

What have we done to reach these goals?

We followed the lectures and used the methods and techniques from the three courses, linear algebra, imperative programming, and problem-based learning in science, technology and society (PV) to create and accomplish this project.

Did we reach these goals?

The knowledge goals are reached. That can be seen in the problem analysis, where we try to understand and explain the problem's issue. Then in the theory section we use theories to describe the image editing. In the design section we describe the program code we have use and made for the program. When the program was being developed, we worked imperative, which means that we worked from the bottom up. We developed the various functions when they where needed, and when we reached the part where they where needed.

We had reached the points under the skills goals, because we had organized the group by giving each member of the group an assignment they had to do, and have a meeting each week, where there is an agenda to follow. We used a project planner (Microsoft Project) to create a time schedule, and manage our resources.

To reach the points under the Competencies goals we have made tests of the program, where we discovered various errors, and thereby things to correct. We analysed different programs for creating passport photos, where none of programs we looked at, had a check part, where the many rules of passport photos, which our program can.

5.3 Problem Based Solving

Problem based solving basically means that you find a problem, document the problem, and try to solve the problem. If a group works by 'problem based solving' they have to start looking at society and find out what is wrong, or what could be wrong. When they think they have found a problem it then requires an analysis to see if it really is a problem.

If the analysis concludes that it is not a problem, start over, but if the analysis concludes that it is a problem the group will have to start looking at the reasons of the problems. Is it society's general opinion about it that is wrong, or is it a governmental problem. When the conclusion of this problem has been done, the group can start the solving part, which can be a quite long process because there can be so many things to consider.

The group will now have to make solution suggestions, preferably an appropriate amount (it is up to each group to decide what an appropriate amount is for the specific problem). After the making of the solution suggestions the group will have to "test" the most considerable solutions, and make a conclusion for which of the solutions that seem to be best suitable for this project. If the group has time, they could try and ask the authorities and see if it is something useful for them.

We can conclude that this way of working went well, and it is not a thing that would make us change our study program. It is a method that suit all of us and we are excited about this kind of learning. We find it very useful because this is a very realistic way of working, and it could even be used in real world problems.

5.4 Responsibility for Own Learning/Mutual Responsibility for Learning

At a university you have responsibility for your own education. Absence has no direct consequence like in high school. This is however a great responsibility. In our group contract it is stated that every member of the group must be at the lectures. This is because we think that the lectures are a very important part of understanding the courses - and we need to use much of the knowledge from the courses in the project. Because Aalborg University is based on group work, each group member has a responsibility for the mutual learning in the group. This is easiest achieved if each group members has been in the same lecture, and thereby has been taught the same methods. This helps if a group member does not understand something, the other group members can help him understand.

5.5 Learning Styles and Work Environment

It is important to have a healthy work environment. We have opened the window several times a day in 20-30 min. duration. We also usually have it open when we are attending lectures. We have experienced that some group members lost their concentration due to lack of oxygen in the room. Some of the group members worked partly at home and partly at the university because they work better at home. This helped to give a better working space, not because there was a lack of space in our group room, but because some people lost their concentration if they sat in the group room all day. To improve our working environment we have made Christmas decorations, and bought home appliance items such as a microwave oven, a refrigerator and a kettle. It might seem small, but it makes the group room feel more like home.

5.6 Knowledge Sharing

To manage our project we use Subversion (SVN). This helps us work in the same documents at the same time without data-loss. SVN also makes it easier for us to correct each others work, because it keeps track of our corrections. This means that if two persons have made corrections in the same document, they will get an error when trying to commit

the document to the project. This way they can merge the documents without data-loss. We have a structure in our folders where the documents which are ready to be corrected must be placed in one folder. When the documents are corrected, they will be placed in another folder, containing all the documents which are ready to be put into the report. This process does, that almost every group member reads and corrects each document. We have also acquired a projector to help if we all have to look at the same document at the same time.

5.7 Blooms Taxonomy

Bloom's taxonomy is a scale with 6 steps showing abstraction levels for how good one's learning skill is. The 6 steps can be seen on Figure 5.1.

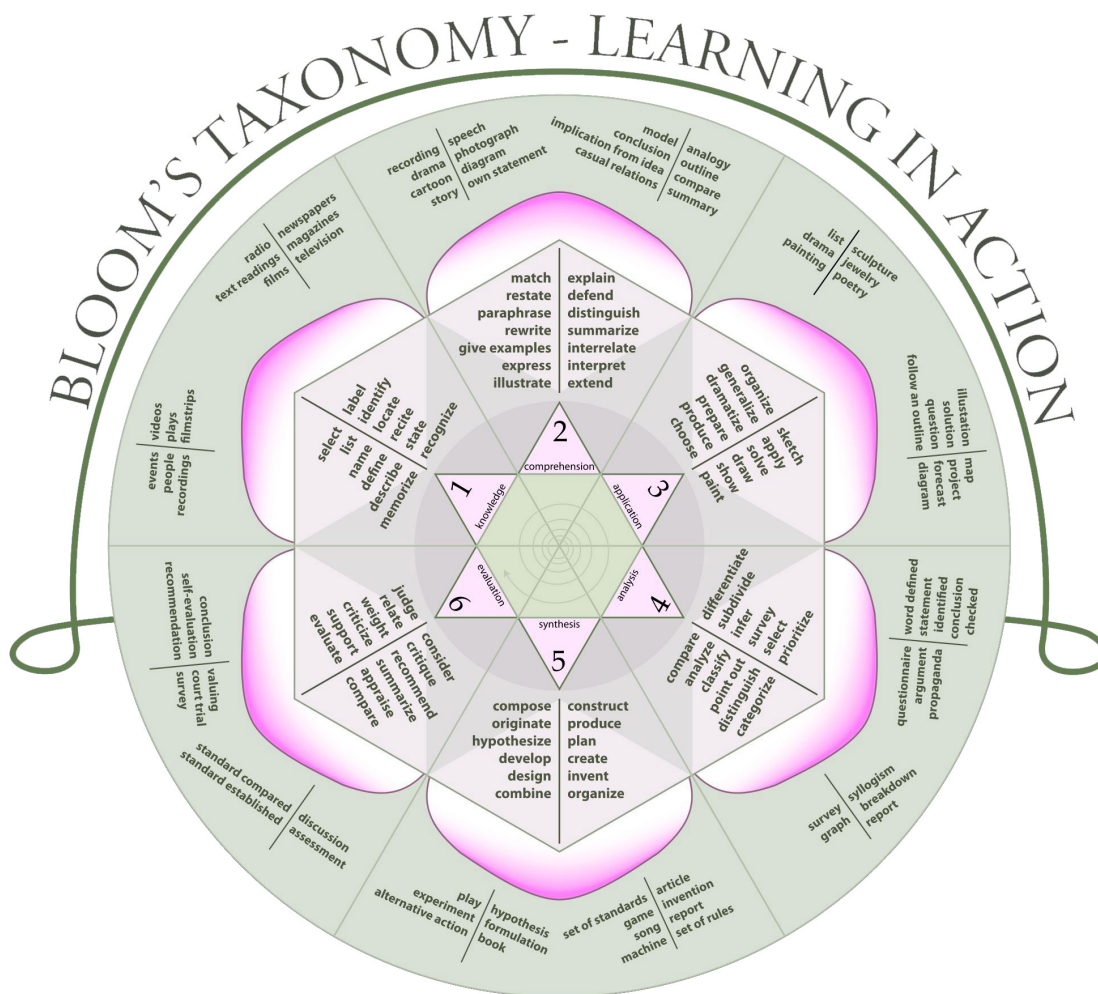


Figure 5.1: Blooms taxonomy (Source: http://en.wikipedia.org/wiki/File:Blooms_rose)

We have used this to see which step we have stepped up to, and we can conclude that we have reached step 6 because we can easily evaluate this project and see what our profit is, what has been forgotten, what could we have done better etc. It can be seen in our report that we have reached the 6th step, because we analyze and synthesis in the

discussion and perspectivation sections, and we evaluate and conclude on the process in the conclusion.

Discussion and Putting Things into Perspective 6

In this chapter we will discuss and perspective over this project and the work regarding it. In this project we made the arrangement that we worked from 9:20 to 16:15 everyday if there was not planned any lectures. This resulted in a very high amount of productivity, but still with space for funny moments. It was respected if a group member of the group would like to work at home after 14:00, but most of the time did everyone work in the group room. This secured some individuality, which again improved productivity. It is important for the group to be social and friendly with each others because it enhances and improved the group spirit. This can also be related to work in the future were it is important that you can work with other people and be part of a group.

We had regular meetings with the supervisor and secondary supervisor, which resulted in that we stayed on the right track at all time. It was very easy to get an overview of our project due to the fact that the structure of the report was very organized. We had made a very good time schedule which made it very easy to keep track of the project process. We had made different roles for each group member to fill, and that way had more order in the whole process. If this should have been done any different, we should have used the logbook as tool to control the project, but the time schedule work very well.

Compared to our P0 project, we have worked much harder, which resulted in a much better report - content wise. Our working progress has been really improved as a result of the great structure. We think this is worth to take with us to future work in groups, because it is an effective method for project work and makes the process easier to comprehend.

Conclusion 7

The whole project has gone well, we think that we used an excellent method to control the process. The time schedule and the coordinator have been some spectacular tools and have helped us a lot through the project keeping an outline of it. The other roles have also been a great help because they made the process more structured and therefore easier to comprehend. For example, our agenda manager made it easier to have a meeting and to keep track of what to discuss at the meetings. The agenda manager was used both at the group meetings and the meetings with the supervisors.

This project is based on problem based learning which means we will have to work with a problem and try to develop a solution to the problem. Problem based learning helped us understand the context of the problem. The context meant that we made a target group analyses to help us design a product designed to help the targeted group. All group member have been active regarding the work with the project and thereby all member have been a part of the project. Through the project we have also gained new knowledge to the subject and learn to better communicate this new found knowledge. So all in all, we have learned a lot regarding working in a project group and to process a problem. We have also gained new tools to project management and controlling the process.

Group Contract A

B205 - 17/10/12

Rules

- § 1 If anyone breaks rule 2-7 the rulebreaking person has to buy cake/sandwich/pizza or the like to the other group members.
- § 2 Keep appointments - also meeting time.
 - a You need to notice the other group members if you are unable to come or are late.
- § 3 A normal workday is from 9:10-16:15, unless there is a class in the morning - Then the meeting time is when the class starts.
- § 4 Everybody need to be ready to work at 9:20.
- § 5 Lunch is from 12.00-12.30.
- § 6 Be professionally dedicated about work, the classes and the solving of group work.
- § 7 All appointments about deadlines on parts of the project must be kept.
- § 8 For all work related documents or other things LaTeX and SVN is used.
- § 9 There are high ambitions about the project.
- § 10 When the group is making important decisions a minimum of 5 group members have to be present
 - a All decisions will be put in the folder "Beslutninger" - Group members not present are notified by sms.
- § 11 2 group members work on the worksheet. If the work is not satisfying 2 new group members will be assigned the work.
- § 12 There will be a morning-meeting from 9:20-9:30 every work day, where we do not have classes. In that case the meeting will be right after the class.
- § 13 If the workload is to much for a group member the rest of the group need to be notified as fast as possible.

- § 14 The group coordinator has the responsibility that this problem is solved.
- § 15 The group coordinator has the responsibility that all the group members are serious about the work and that the timeplan is followed.
- § 16 The group coordinator are allowed to use the necessary means to keep the group members serious about the work - this include the closing of games.
- § 17 Friday meeting is every friday morning unless the group have to go to class - in this case the meeting is thursday morning.
- a On this meeting the work of the day and and the weeks work will be discussed
 - b It will be checked if the timeplan is being follow
 - c Common thread (Where do we want to go? What happens now?)
 - d It will be discussed if anyone is to be punished according to rule nr. 1 - The worksheet are to be send before 12.00 friday. The worksheet is made just after the meeting. The structure of the worksheet is discussed on the meeting. The worksheets is send to the contactperson.)
 - e If any group member knowingly, repeatedly breakes the rules, CET is responsible that it is dicussed on a group meeting.

Also see "Nøglesamarbejdsaftalen" - (The contract about keys the the group room)

Group roles

Coordinator: Christian (If not present Mette)

Moderator: Dag (If not present Aleksander)

Reporter: Mette (If not present Niels)

Contactperson: Mette

Postman: Rasmus

Writer of the Logbook: Aleksander

Writers of the worksheet: Christian and Niels

CET - Conflict Emergency Team: Mette or Kasper or Christian (Only one person needs to solve the conflict but is she/he is in the conflict another member of CET has to solve the conflict)

Time Schedule B










































ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors
19			Disposition of report	6 days	Tue 25-10-11	Tue 01-11-11	
3			Specification requirements	2 days	Wed 26-10-11	Thu 27-10-11	
8			Decription of the program	3 days	Wed 26-10-11	Fri 28-10-11	
11			Structure of program	2 days	Fri 28-10-11	Mon 31-10-11	
30			Target group analysis	3 days	Fri 28-10-11	Tue 01-11-11	
5			Theory of topic	11 days	Wed 02-11-11	Wed 16-11-11	
12			Different program procedures	13 days	Wed 02-11-11	Fri 18-11-11	
6			Decription of program code	4 days	Tue 15-11-11	Fri 18-11-11	
13			Reportparts of program	8 days	Tue 15-11-11	Thu 24-11-11	
4			Introduction	3 days	Wed 16-11-11	Fri 18-11-11	
17			Gather programcode to one program	3 days	Fri 18-11-11	Tue 22-11-11	
14			Test of program	3 days	Wed 23-11-11	Fri 25-11-11	
25			Programmeringsrapport	9 days	Wed 23-11-11	Mon 05-12-11	
15			Read through and correct of program	3 days	Mon 28-11-11	Wed 30-11-11	
18			Perspectivation of the technology on the society	4 days	Mon 05-12-11	Thu 08-12-11	
9			Conclusion	1 day	Fri 09-12-11	Fri 09-12-11	
2			Process analyses	3 days	Mon 12-12-11	Wed 14-12-11	
7			Synopsis	1 day	Mon 12-12-11	Mon 12-12-11	
10			Read through and correct of report	4 days	Tue 13-12-11	Fri 16-12-11	
16			Print and finish	2 days	Mon 19-12-11	Tue 20-12-11	

Figure B.1: The original time schedule for this project

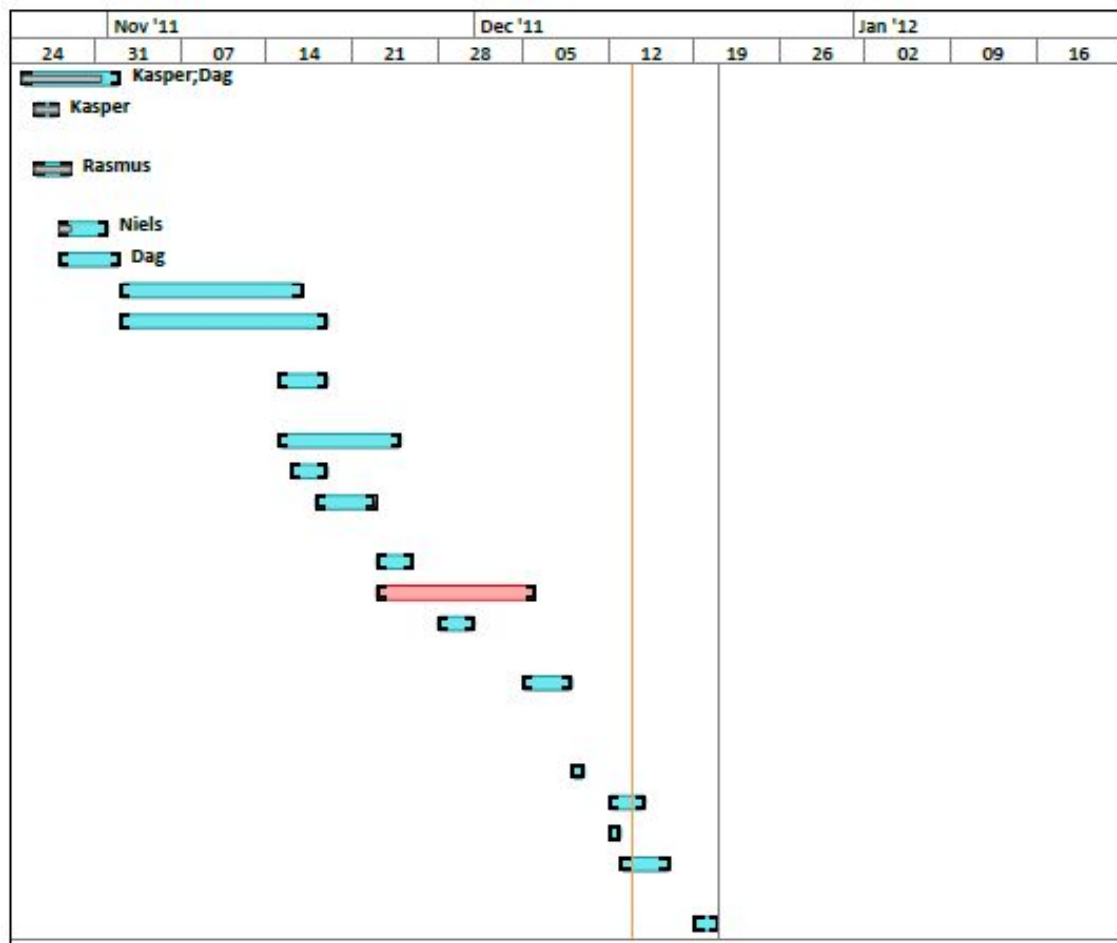


Figure B.2: A Gantt diagram for the original time schedule.