2021

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Process Report

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REVISION HISTORY

|  |  |
| --- | --- |
| Version | Changes |
| 0.1 | - Initial version |
| 1.0 | - Revision history added  - Work division update  - Personal Reflection Iterative added  - Reflection about applying iterative added  - Differences between waterfall and iterative methodologies added |

# Work Division

## Phase 1 – Waterfall

During the first phase of the project, we had to implement an employee’s administration system and work shift scheduling system, some statistics of the different employees were also required by our client. The work was divided as follows:

Rawan Alhabsi – Design and employee management system

Biser Yusufi – Work shift scheduling

Hristo Tanchev – Employee statistics

Stanislav Petkov – Data access layer, UML, Documentation

## Phase 2 – Iterative

During this phase of the project, we were tasked by our client to develop a website for his employees, where they can view their work schedule, edit their personal information, and indicate their work availability. We had to also fix some major issues from the previous phase and implement new features on the C# application related to product management and statistics as well. The work was divided as follows:

Rawan Alhabsi – Overview of work shifts, Website design, Managing restock-requests (depot worker form)

Biser Yusufi – Ability for employees to edit their passwords, Improving work shift scheduler, Product CRUD functionalities

Hristo Tanchev – Editing employee’s personal data, Product CRUD functionalities

Stanislav Petkov – Availability functionality, Website log-in/out functionality, Selling products (cashier form), Product statistics

## Phase 3 - Iterative

During this phase of the project, we had to implement an automatic scheduling algorithm, fix everything that was not finished during the past phases, basic department functionalities, check-in/out and call-in sick functionalities on the website and some additional statistics such as attendance rate of the company’s employees. The work was divided as follows:

Rawan Alhabsi – Department CRUD functionalities

Biser Yusufi – Automatic scheduling, Activity diagram

Hristo Tanchev – Department CRUD functionalities

Stanislav Petkov – Automatic scheduling, Check-in/out functionality, Call-in sick functionality, Statistics

# Personal Reflection – Waterfall

## Rawan Alhabsi

* Basically, what I can say that the project was little bit tough for me, but I have tried to push my team members to work, subsequently, that makes our project much better. To be honest, I tried my best and did not give up. Nonetheless, the team had a lack of communication and did not have the will to work. That leads me to divide the work between us as it can be seen in the project. Indicating to that, I was the one who reminds them to finish their work on time before the deadlines. Which makes me stressed at that time “I don’t mean all members of the group”.
* Moving on, my role in the project was to design the system and implement employee management functionalities. Additional to that, I did the vast majority of the documentations that was needed for our project and that because the team were working at the last time which pushed me to the documentation more. To be clearer if I did not do the documentation no one would have done it. In my opinion, the project didn’t go as I hoped.
* The things that I would like to keep it till the future are, First, is to work on time plus I will keep developing my knowledge that can help me in my studies. And I will try to help others if they need any help. And once I finish my work early, I will ask my team members in the future what is the next step to do. So, we can be more productive in such way and save time.
* To sum up everything that has been stated so far, I hope that the team member work more efficiently. And take the project and the responsibilities more seriously.

## Stanislav Petkov

* The project didn’t go as well as I hoped to, due to lack of proper communication and leaving much of the implementation for the last second. Personally, I feel like I contributed more than enough though. I fixed a lot of the issues my group members were having with their code, created the tables of our database and connected it to our employee administration, did a large part of the documentation for the project, worked on the employee management system and also implemented error-handling. I am satisfied with my performance and the amount of work I have done, but I hope that we do better in the next phase and most importantly don’t leave everything for the last moment, as this was our biggest mistake in my opinion.

## Hristo Tanchev

* I would say that the project went relatively good due to my great groupmates and our dedication to the completion of the project. It took us a while to get along with the communication but when we got along the work over the project began to be simpler to understand what was needed to be done. Unfortunately, I found my part of the project a little confusing, so it took me a while to get it working and I feel that the deadline was too soon for a big project like this one.

## Biser Yusufi

* On a personal level, I think I could have done better, but I still managed to implement the scheduling system for the work shifts of the company’s employees and connect it to our database. It didn’t meet every requirement given by our client, but in my opinion part of the reason for this is that it was the hardest part of the project to get working the right way. In the next phase of our project, I will take into consideration the given feedback by our tutor and client and will try to improve this part even more. I hope that we, as a group, get our stuff together in the upcoming weeks and finish everything successfully.

# Personal Reflection – Iterative

## Rawan Alhabsi

* The project was little bit tough, but we managed to cover all the requirements at the end. We managed to contribute with each other and implement what we suppose to work on. In my role of the project, I implemented several parts such as: the department management, scheduler and design of the website. It took us a whole semester to finish it and make it done and work perfectly.
* Furthermore, the work went badly in the first phase, but afterword me and my teammates managed to improve our skills in coding and the group collaboration, where everyone started being active and know what to work on. Our group communication has become much better than before, and we also used to help each other in case someone needs help.
* The good things that I would like to keep them for the future are professional skills in a documentation, technical skills, work as a group and what I’ve learnt during this semester. Moreover, I would like to improve my skills in coding more, where I can cover all exceptions that might occur.
* Overall, I feel satisfied towards our project as we really worked hard and did our best for it. I’m happy to be part of this project and sharing this experience with my group members.

## Stanislav Petkov

* During this project I was the team leader and the spokesperson of the group. This is a role that comes with a lot of responsibilities like dividing work, communicating with our client and tutor and making sure everything is going smoothly.
* At first, I didn’t take my role seriously enough and just thought that everyone will know what to do and will do his job on time. After our failure in the first phase of the project, measures were taken to prevent this from happening again. Internal deadlines were put in place and a better communication was established between the group members, which helped the team finish the given workload on time. During the last phase we had a few in-person meetings, which in my opinion also helped us to implement the solution in a better way and get to know each other more.
* One of the key takeaways for me personally is establishing internal deadlines early on and planning out the project. This definitely helps in keeping track of the current progress and what is left to be done. Another one was setting a proper gitignore file, which also saved us a lot of trouble and merge conflicts. I will definitely adopt these strategies in my future projects as well.
* Something to-be improved is definitely proper work division and git branching, I felt like we didn’t do a very good job at utilizing the branching features of git and this was also due to poor work division at times.
* Overall, I think that the project could have went a lot better, if we communicated better, but still I think we did a decent enough job to satisfy most of our client’s requirements.

## Hristo Tanchev

* With the project coming to an end, I am happy with our project overall, we had ups and downs, but we managed to get along and work together. Also, it took us some time to build our communication, but I believe we did well on that at the end. I feel like we have worked together as a group. I believe that I learned a lot from this project, besides the technical side I also learned a lot about how to create proper documentation. For the next time with that knowledge, I would try to create the application with more of the S.O.L.I.D principles. The tasks given by our client were complex but fun to figure out a solution for. I feel like overall the quality of our application is decent.

## Biser Yusufi

* I have been very glad for working with my current teammates for the past few months. I think that at the beginning we did not have a clear idea how we are going to collaborate with each other and if we can do so. But I think, with the time we found the right way of collaborating and I am very proud with the team. When it comes to the project – at the beginning we didn’t have clear idea what the task was or how we are going to handle it but, with some effort from everyone I think we managed to clearly understand the task and get a clear idea how we should build the product. This project did not only teach me how to work in a group, but I also gained new programing skills. Mainly, I understood how to work with SQL databases and using that in a program. I was satisfied with the meetings because that’s where we gained a clear view of what should be done.

# Reflection About Applying Waterfall

Weaknesses:

·       Basically, what we can say that at the beginning we faced some difficulties in managing our time in dividing the work such as documentation, software system, and UML diagram. The particular reason for the circumstance is the deadline. As it is well known that in each week, we have some tasks which were required from us to do in order to complete the project that has deadlines. And each time we submit the assignments we receive a feedback from our tutor or client, based on the feedback we need to develop the documentation, our software solution or the design again. According to that, it takes time specially when we are working online and in different time zones.

Strengths:

·       On the other side, the benefits of the indicated points are:

o   Gaining the ability to manage the time and knowledge from each other, which increased the communication between us even though it was quite stressful.

o   Learning how to develop our ideas based on the feedback we received it from the tutor and the client.

o   Based on that we have improved our writing of documentation that is related to the project.

o   The team collaboration has increased and built a great synergy between us which help us move on with the project.

# Reflection About Applying Iterative

Strengths: The iterative way of working allows us to update our application constantly and the feedback from the users is based on a working product, not on some use cases for example or other theoretical stuff. With each iteration we can also easily measure the progress made and set milestones for the next one.

Weaknesses: A major drawback to the iterative approach is that in most cases the user-requirements are updated constantly, this requires a lot of updates regarding documentation and also restructuring of the application itself, which can cause a lot of troubles/risks and workload for the developers.

Conclusion: This way of working can be very useful, but only in certain scenarios. For example, your client is not sure how he wants his final product to look like, so when you develop it in iterations, he can get a better idea of what he wants. Overall, in order to successfully execute a project iteratively you need a team of skilled developers, so this approach is not recommended for everyone.

# The Differences Between Waterfall and Iterative

The main difference between a waterfall and an iterative approach is that when using the waterfall approach the project is executed in a linear fashion: you come up with a plan, implement it and then test it, whereas when using an iterative approach, you go through the same steps but multiple times, that’s why the iterative approach allows for a lot more flexibility and change of plans.

With the waterfall approach you do the testing at the very end, whereas with iterative you test out your project a lot more often, which can definitely help your team find potential risks much earlier on and prevent them from blowing out of proportion.

With the waterfall methodology, you have clear goals and deadlines, which you must follow, whereas when you execute a project iteratively your goals change constantly and most of the time the final deadline for the project is not clear.

In conclusion, both of these approaches can be very useful, but the project case should be suitable for such an approach. In my opinion iterative is better for smaller-scale projects, whereas waterfall is better for big projects, where the goals are clearly outlined.