**Process Report**

“MediaBazaar”



Student| Student number:

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# Work division

During the last part of the project work division has been greatly improved. All objectives were divided into smaller tasks and were split among all team members. Git Issues section was used to keep track of who is responsible for which tasks. All bigger tasks had two or more persons responsible for them.

Basically, every objective is discussed among all members where we share our ideas on implementation and visualization of the task. Once we come up with an approach, the member(s) assigned start working on it. In case of getting stuck or finding the approach invalid we regroup and discuss again how to better the solution. If we failed to split the objective and it was still big, we have worked all together sharing screens and taking over controls when needed using Microsoft Teams (i.e. Automated Scheduling included multiple such sessions).

V. K. has completely redesigned the website adding customized pop-ups and making it more user friendly. In the application Viktor added some flexibility to the schedule by enabling scheduling of employees to different departments than they were originally assigned to.

Tudor Rusu implemented the schedule preferences in the website that were later used for scheduling (with help from E.). He was also the lead of automated scheduling (with support of other members). He added necessary classes and methods to implement the automation. Lastly, he was the main person for code refactoring.

I. B. implemented Unit Testing and a weekly schedule overview as per Client’s request. Moreover, she implemented (with help from Tudor) the vacation request approval in the application.

E. P. implemented design improvements in the application (a.o. schedule meter), added minor fixes after each iteration (following tutor’s feedback).

# Personal reflection

## I. B.

Iteration helped us a lot in organizing in general. Because this project is big and the main goal was divided into smaller ones, it was easier to complete the project by following iteration methodology. However, since every iteration lasts three weeks, and some problems might need more time to be researched, it can cause more issues in later implementations.

During this semester, besides project, we had other assignments to work on. That created the same problem that occurred in earlier stages of this semester. It was not about the workload, but more about everything happening at fast pace, and given the circumstances that we are currently living in, it resulted in students being more stressed than usual. Our group also experienced that, and it did affect our performance. Eventually, we did manage to finish everything on time, but it was a bit more challenging.

One of the bigger challenges that we ran into at the beginning was making the website calendar work because we did not know how to convert dates into week numbers that we used in the application as there is more ways to calculate them. During the automated schedule implementation, there were obstacles we had to face and at the beginning did not know how to solve. For example, we had issues with multiplying records of shifts, and it was very tricky to find the solution, but at the end we managed to solve it. Lastly, unit testing made us realize how important code refactoring is because not all things in our code were testable.

Overall, I think that all the issues mentioned above would be much harder to manage if our group was not as supportive and cooperative as it is. This is the best project group I had so far, and it has been a real pleasure working with them. Even though we all got stressed and worried about certain problems at some point, we got through all of them together and that is what made our group strong.

## Tudor Rusu

I would like to start by mentioning that for me the project was the most interesting thing that we did in this semester not only because it developed us in being a team players, but also because we got to fully practice most of the things that we learned in OOD and WAD, and also experience situations that may occur in a real work environment. The fact that our tutor always gave us feedback on the GUI of the application and functionalities really made us improve it and in the end, have a good final product.

In my opinion there is no good or bad methodology, both of them have their pros and cons, the only thing that you have to figure out is which one of them suits the particular situation the most. For our group I think the best of one was the iterative one because it helped us divide the work that had to be done in bits, and that was for the better because everyone had the opportunity to choose whatever they wanted to do. Also this made me realize that the Waterfall model has a good side, that being that the multiple documents you need to prepare for it gave us a better idea on how the final product should look like and to take in consideration every scenario that could arise during development.

The most challenging thing for me during this project was not coming up with a code that will achieve it’s intended use, but how to structure it into classes for it to be easily maintained and manipulated in case of any changes needed to be done to it. By refactoring it I realized how important it is to give methods and variables ideal names and also put them into proper classes.

Another thing that I personally struggled with was implementing the calendar in the website because it wasn’t clear for me how that library worked. But after E. made the breakthrough with it, figuring out how to load it and display it in our website, I was able to modify it in order to suit our needs and after that, Viktor was able to refine it, and have a good look to it.

As a conclusion I can say that the project was a success and I learned a lot from the whole process, and in the end we managed to deliver everything that was required of us and also promised by us.

E. P.

This project was the most synergetic subject of this semester. It was quite challenging, but it also felt like a glimpse of what we could do in the future once we graduate. The iterations were a nice approach to the process. I particularly liked that it was so controlled and well-supervised (dense meeting schedule was much appreciated here). Having the workload planned in these “loops” of intense work and planning really kept our heads in the game while also allowing us to breathe in between. We did face some obstacles that we needed to overcome in order to come to a viable solution that we all liked.

The first challenge that was puzzling us was the UML class diagram that we tried to make before even starting to work on the code. It was a real struggle as we had little experience and still had difficulties grasping the scope of the whole thing. In the end we managed to show some sort of sketch that we came up with, however we could tell it was not very satisfactory. Thus, sadly, we just moved on to next tasks without even using it in the end. The only good outcome of it is that it eventually helped us get a better picture of it all.

The next big trouble was keeping up with the OOD principles that we were learning at the same time and refactoring our code to apply these principles. Since, we were kind of expected to do it continuously in between tasks/objectives - it was a challenge. It also added on the fact that our UML class diagram was never fully completed nor utilized. Meaning we did not have a shared plan. Thus, the refactoring task was difficult to share among team members as we all saw it differently. In the end mostly one member was refactoring it over and over.

Last but not least, during the last iteration while trying to create a separate database class (layer) to handle all database calls we managed to cause a Stack Overflow error. This was a part of last refactoring process and yes, we know we should have done it way before – lesson learnt. However, it was a procrastination on our part and it took as way too long to find out what exactly was causing it as it was a late night and we were all frustrated and sleepy, unable to think clearly, just trying to make it work to show to the tutor the next morning.

Finally, the team itself was one of the best that I have worked with so far. Everyone was dedicated and eager to do their best. We did have some ups and downs of course, as most of us are pretty shy and introverted. However, it was fascinating to see us crawl out of our shells and start speaking up and share our own ideas. That is why our little brainstorming sessions was my favorite part. We decided on how to split work, who wants to implement which part and most importantly how. The how part is where I realized how different we see things and yet we always managed to agree on a solution or approach. Therefore, communication and compromise are our strongest quality. Every little quarrel or disagreement we had (only a few) was because we were not honest enough and proper communication was a solution to it. After we finished our task whether alone or in pairs, we always had a “show’n tell” meeting to make sure we are all aware of the progress made. We have learnt a whole lot from this project and especially from each other this way.

Therefore, the project was challenging and yet it helped us develop our hard and soft skills at the same time. I can proudly say it was my favorite subject of this semester.

## V. K.

During this year we saw two different methodologies which are waterfall and iterative. When we started with the waterfall methodology, we had everything defined and we knew what to expect and what to work on. In other words, the works was given clearly to the point. In the iterative methodology we had to make a lot of assumptions and make the solidified requirements. I personally thing that the first methodology is one of the best ones if you are starting a project. I was clearer and easier to understand. In the second one we had more difficulty for sure, but we still managed to make it through.

For the participants in our group we are four, E. P., Tudor Rusu, I. B. and I. We worked as a group and that really made an impact on me because I am used to working alone. I can now say that I know what the feeling is to work in a team. We were always together good and bad. Concerning the work, I feel that some people had a bigger presence than others, but we always sat together and worked on it together. We stayed late just so make sure that we finished before the deadlines.

There were some implementations with which we struggled. For example, the calendar plugin for the website. When the plugin was implemented, we had to learn about it so we could make the calendar work with our database and to change its design. We managed to overcome this and make to work properly. Another thing with which we struggled is the Unit testing. The problem here was that our code was not structured correctly and some of the tests would not work. For the problem to get resolved the entire programs code must be refactored. This is something that we are doing now and is going well.