Process Report - GodEats
Group 8

Daniel Railean, 294241

Satish Gurung, 299123

Dimitrian Cebotaru, 299115

Mark Vincze, 224478

Supervisors:

Troels Mortensen

Joseph Chukwudi Okika

VIA UC

22356 Characters

Software Engineering

3rd Semester

04/06-2021

VIA Software Engineering Process Report - GodEats
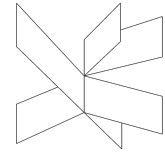
Table of content

[Mark]

1. Introduction

This report will detail how we had been working on our project as a group. We had been put together as a group by our supervisors, to become a four-men team.

As the lockdown was still going on when we started our semester online, we did not have the chance to meet in person at the University. Therefore, we held our first, non-official meetings in the last week of February, in the form of e-mails and chat messages, where we discussed what the project proposal should be. Initially, it was not easy to get it accepted as we had two dominant ideas that split the group, but we managed to quickly overcome this after the meeting with our supervisor. We were able to hand in the project description on time, on the 7th of March, which was accepted with minor changes needed.

After this, our process has slowed down as we could not meet every week and were not able to continue with the momentum we have gathered with our previous ideation meetings. We have gotten behind with the time and failed to deliver the system architecture in time. This has resulted in us having several meetings with our supervisor to help us decide on the technologies to be used. Following this, we have decided to start working more intensively in the sprints (see Appendix).

Most of the work was done individually, everyone got tasks that they had to be working on each sprint. We had been using SCRUM as our main guide to the meetings that we held almost every day, with the exception of days when there were personal matters to attend to. We were able to progress rapidly with the implementation so we can say we have a working beta as of now.

The next chapters will give a more detailed overview of our group, our way of working together, the project itself and finally our reflections and conclusions.

[Mark,Daniel,Dimitrian,Satish]
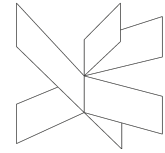
2. Group Description

This semester, our group consists of four members that are from three different countries: Daniel Railean and Dimitrian Cebotaru are from Moldova, Satish Gurung is from Nepal and Mark Vincze is from Hungary. In the following paragraph we will have some more detail provided about how the duties were split between us and the implementation of the project.

As mentioned above in the introduction, we were working on our own in most cases, which means that Satish and Mark were always doing their jobs alone. However, Daniel and Dimitrian were able to meet up sometimes to work together.

Daniel had been leading the work and contributing as well to many aspects on the full platform, such as the database, communication between layers and tiers, and the user interface. Dimitrian was working closely with Daniel, his tasks included the logic in the business layer and the designing of the user interface. Mark had the job of setting up the presentation tier, communication between tiers and the initial look on the pages. Satish had helped set up the data access tier.

All of us have been doing projects previously and Daniel, Dimitrian and Satish were also working together in a group before. Mark was new to the class, due to repeating the semester, thus he did not know anyone, but has had the same amount of experience as the other team members.

Our cultural background did not affect the work, even though we have differences, as we are from three countries and two continents, having been Moldavian, Nepalese and Hungarian.
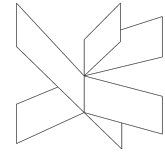
3. Project Initiation

The team was initiated by our supervisors, putting Daniel, Dimitrian and Mark together, as Mark did not know anyone prior to the semester for the reasons mentioned above. Couple of days later, Satish had joined the team, as he had been working together with Daniel and Dimitrian.

Afterwards, we started the conceiving of the ideas where we had two main ones to do the project with: a book rental and a food ordering application. We had no prior knowledge on any of them other than using applications like this before, eventually the food idea got accepted by everyone after meeting with our supervisor.

The design of the system did not go as planned, due to different personal matters, outside of school life, so we could not work as efficiently as we planned to do it. Following the system design, we had started to work on the implementation, tracking the work in an Excel sheet (see Appendix A). We had been able to get a working proof of concept slightly after the deadline, thanks to the group work.

Then moving onto the setting up of the version control had some difficulties as most of us have not used it under such strict, but needed rules. This meant that our product was mostly safe from mis-commits and working at all times while new features could be added.

Bring ideas to life
VIA University College

[Mark]

4. Project Description

Following the selection of our problem, we drafted the project description, it was at this phase of the project that we further defined our problem. The outcomes are detailed in the appropriate sections of the project description.

Coming up with the problem statements was not an easy task, it took some time until we could agree on a good set of questions. As this market is starting to boom around Denmark, there are several other applications that offer similar services (Team, 2021). Accordingly, we had to adjust ourselves to the expectations that these companies have already been doing fairly. We had defined all the problem statements we could think of, to fit our requirements as much as possible.

Our goal was to deliver a product that presents an easy-to-setup, easy-to-handle approach, so that our customer is able to get their products out there without hassle and a lot of training. This we have partially achieved as we have proceeded slower than expected in the beginning, we did not have proper time to make the last touches to make the experience even better.

This was realistic as to the extent that we learned all the different technologies we had to utilize but we had to use some of these for the first time in a bigger system, which caused us work hours to spend on brushing upon these competences of ours. Considering that we had not been able to meet up and only work through occasional screen sharings, voice and written chat, this had gone better than expected.
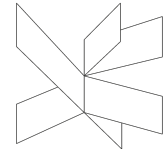
[Daniel,Mark]

5. Project Execution

As mentioned above, we utilized SCRUM for organizing the teamwork and the meetings. This had not been such a success as we did not start the planning of it enough on time. Consequently, this caused us to work slightly less disciplined, might be also less efficient, but made us realize even more of the importance of documentation on a regular basis.
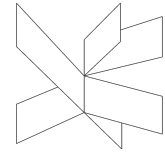
We followed the plan we set up in the timeline as for the sprints, with each of them we were supposed to finish a critical part of the system, but we were not always able to finish some of the tasks on time. This caused us to work rather unorganized, but we were still able to implement nearly all the use cases.

We used Google spreadsheets to document the daily SCRUM meetings and the SCRUM sprints and we were to start the project again and in the future as well, we would have been more adamant on the SCRUM rules, document our meetings and discussions in a proper and more useful manner. As we stated in the methodology section of our project description (see Appendix A).
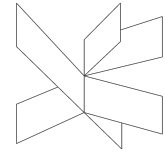
Below you can see the overview of our first and last SCRUM sprints, including the SCRUM planning, Daily SCRUM Sprints , sprints review and retrospective.
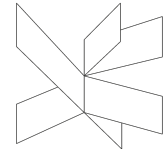
1st Sprint documentation

1st sprint planning				
Product owner	Dimitrian			

VIA Software Engineering Process Report - GodEats

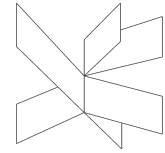| SCRUM master	Daniel			
Functionality to be implemented	As a guest, I would like to register on the platform.	As a guest, I would like to log into the platform.	As a user, I would like to edit my profile.	
Date	3 May			1st Day
Participating	Dimitrian	Satish	Mark	Daniel
Worked on	architecture diagram	architecture diagram	architecture diagram	architecture diagram
Plan to do	Business tier	Data tier	Presentation tier	Business tier
Obstacles found	none	none	none	none
Date	4 May			2st Day
Participating	Dimitrian	Satish	Mark	Daniel

Bring ideas to life
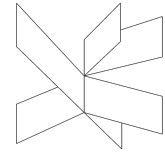VIA University College

Worked on	business tier	revising spring boot	set up blazer web server; made models; add date, phone number ; connection.invoke("RegisterUser"," Registered")	business tier
Plan to do	business tier user registration	REST registration endpoint; creating tables	User registration with Signal R	business tier user registration
Obstacles found	we don't study signal r in the curriculum	nothing yet	SignalR is new	we don't study signal r in the curriculum
Date	5 May			1st Day
Participating	Dimitrian	Satish	Mark	Daniel

Bring ideas to life
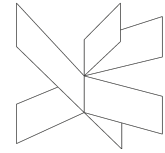VIA University College

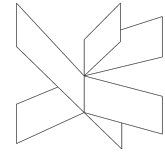|				
Worked on	signalr learning> found new fitting tutorial	working on endpoints	client connection	signalr learning> found new fitting tutorial
Plan to do	business tier > user registration	work on the tables	user registration in presentation tier	business tier > user registration
Obstacles found	oficial .net signal r tutorial does not separate the client from the server in signalr	no obstacles	we tried a wrong tutorial	oficial .net signal r tutorial does not separate the client from the server in signalr
Date	6 May			1st Day
Participatin	Dimitrian	Satish	Mark	Daniel

g				
Worked on	signalr learning	used sqlite	client connection	signalr learning
Plan to do	business tier > user registration	work on the tables	user registration in presentation tier	business tier > user registration
Obstacles found	lack of time due to work	non familiar with sqlite > changed to postgres	none	lack of time due to work

Date		7 May		1st Day
Participating	Dimitrian	Satish	Mark	Daniel
Worked on	not present (personal problems)	worked on database connection,	worked on dnp assignment	created api solution and started

Bring ideas to life
VIA University College

		created users table		making endpoints
Plan to do	not present (personal problems)	debugging of api	finish REST part	finish business logic
Obstacles found	not present (personal problems)	cannot get proper db connection	a bit of misunderstanding	lack of time due to personal reasons (broken pc)

Sprint review	7 May	Everyone present		
Finished backlog items:	As a guest, I would like to register on the platform. (partially)			
Backlog items in progress		As a guest, I would	As a user, I would like to edit my profile.	

Bring ideas to life
VIA University College

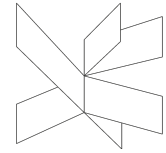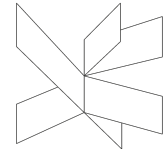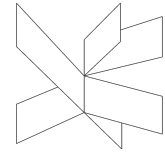|				
		like to log into the platform.		
Sprint retrospective	During the sprint we implemented one of the desired functionality , however the rest is not done as the work needs to be done on three different tiers so not everyone finished in time			

4th Sprint documentation

4th sprint planning	31 May			
Product owner	Dimitrian			
SCRUM master	Daniel			
Functionality to be implemented	As an administrator, I would like to cancel orders.	As an administrator, I would like to add new administrators.	As an administrator, I would like to reply to the messages in the chat system.	Project documentation

Date	31 May			
Participating	Daniel	Mark	Satish	Dimitrian
Worked on	Worked on the chat	Worked on documentation, added dock fx	Worked on the order page	Worked on the ui,
Plan to do	Start the documentatio	Continue on the code	finish order page by today	Finish ui by

Bring ideas to life
VIA University College

|		documentation		today
Obstacles found	none	never used documentation generators	haven't read use case description properly	had api error
Date	1 June			
Participating	Daniel	Mark	Satish	Dimitrian
Worked on	Chat and documentation testing, finished chat entirely	documentation, testing	worked on order page, did not finish it	navbar for the site
Plan to do	Test documentation , work on pr, tweak the ui	finish source code documentation	start the project report analysis on security	use bulma styles to improve the ui
Obstacles found	could not start documentation server	none	problems with order page > reassigned to daniel	none

Date	2 June			
Participating	Daniel	Mark	Satish	Dimitrian
Worked on	order confirmation page, chat ui	process report / code documentation	analysis on security	Refactoring admin editing pages
Plan to do	project report	process report / implement zombie testing	start with the design part	Project report
Obstacles found	none	none	none	none

Date	3 June			
Participating	Daniel	Mark	Satish	Dimitrian
Worked on	Project report	Class diagram	sequence diagram	Project report
Plan to do	Project report	class diagram data tier	activity diagram	**Project report**

Bring ideas to life
VIA University College

Obstacles found	none	none	none	none
Sprint review	3 June	Everyone present		
Finished backlog items:	As an administrator, I would like to cancel orders.	As an administrator, I would like to add new administrators.	As an administrator, I would like to reply to the messages in the chat system.	Project documentation
Sprint retrospective	This is our last sprint and all of us tried their best to deliver a well documented product by the deadline.			

The interested reader can find the documentation for all four scrum sprint in the Appendix I

As far as the results of the project, we are pleased with the product part, since we had developed a functioning system with only a handful of bugs we
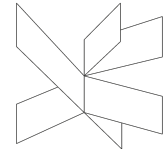
could not yet fix and some more features that had to be carried out if not accounting for security problems.

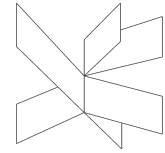## Personal Reflections

[Daniel]

Daniel:

This semester was once again a challenging one. This semester we had an interesting task in front of us: designing and developing a three tier system. The most interesting part of it is that tiered architecture is most commonly used nowadays in developing software systems.

I think that this project is not a big success nor a big failure. The development process was challenging and I feel like I learned a lot, put alone the Chat System Implementation, which took me 4 days of straight work but now I see the effort that goes in, every time I see an online support system on a website.

We tried once again to use SCRUM methodology, and it also went better than the last SEP, in the end providing us a boost of productivity and the opportunity to see our progress.

I would also like to mention that I really enjoyed this semester, even if we didn't have the opportunity to meet in person at the campus, but I also really hope that the situation will become safer so we can hopefully meet in person in the next semester. Which I think will make me even more motivated to continue my journey into Software engineering.

VIA Software Engineering Process Report - GodEats
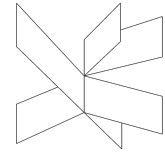
[Dimitrian]

Dimitrian:

This semester was as special as the previous one. The purpose of this semester project was to create a three tier application.

In the beginning, we had to write the project proposal. It wasn't so hard, so we had 3 ideas on the paper. I was really happy that my group mates and I agreed on choosing my idea, known at the end as "GodEats". If you are thinking about this name, you can notice a lot of meanings. Writing the project report was pretty easy, after we all fully understood the final idea. Writing the use cases and use case descriptions was interesting, knowing that it was what I wanted to do.

The pandemic and the closed university was an unfavorable factor, but compared to the second semester, this semester we have made visible progress.

When we started with Scrum meetings, I wasn't used to it. It was hard for me , because I was familiar with it, but not entirely. I had to study again about Scrum and everything about it after a break. So I spent some more time on it again. For Scrum Meetings we used Discord, but the scrum sprints were written in Google Spreadsheets. I was making progress after some Scrum meetings and I can say that I'm finally used to Scrum and Scrum meetings. It helped me a lot with managing time.

Also I started to understand why Git is so important when you want to do something qualitative. This project taught me a lot about it. I have a better understanding of managing branches, commits and how to make pull requests. I was feeling better when I started observing positive feedback on my pull requests, but also when there was something written to make me better.

The Three Tier Architecture seemed impossible to understand and apply, but in the end it became as understood as the MVVM in semester 2.

At the end I would like to thank our supervisors, who tried their best to help and understand us. Thanks for the time spent with us and for having time for everyone. I would also like to say thank you to my group mates. We did our best and I think that if we had another two weeks, we would be more successful than that.
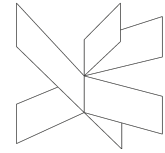
[Mark]

Mark:

Personally, I felt this project started out passively, as I had just joined the class, I did not know anyone, so I got my group mates assigned to me by our supervisors. For me this was the first time I did not know my team prior to starting the semester project, this meant meeting and working with new people.

In the first weeks of the semester the communication went slowly, we took a long time to finalize the idea, as we were not so familiar with the choice. I personally wanted another idea to be designed and implemented but my teammates convinced me that it will be a better one to make. Eventually it turned out to be a better idea and maybe a slightly more unique one.

The work with my team did not always go smoothly as we had other duties to attend to and sometimes technology was not on our side either, when it came to our meetings – meaning microphone, software or internet issues. Our contract was strict, which helped us to stay in line as the sprints were going, personally I felt like this was essential for us to get this far.

As for the team, I like to believe that everyone was doing their best to contribute to the project, my mates were very responsive and always helped out when it was needed. I have learned new ways of using tools that are crucial for group and project work, namely the even deeper importance of git and how to

work with a bigger heterogeneous system. Although I had been able to achieve more, I also felt that new challenges arose and I had not always been able to keep up my focus and got stuck a couple of times.

I found it a bit demotivating that we could not work together in person, because I think we would have had a better chance doing the project with personal meetings along the way. However, what motivated me is that I was able to work with people with more experience and knowledge in programming.

I am hoping that the next semester will be different in this case, and we will all be able to meet and work in person.

[Satish]

Satish:

This semester went completely different than the other semesters as we had our every lesson online due to the current situation around the world. It was a little bit hard for me and my team at the start as we could not meet physically and decide things together but later on, we managed everything.

Throughout the semester, I gained a lot of knowledge over different subjects and topics. We learned a completely new programming language i.e., C# which is also an object-oriented programming language like JAVA for .NET framework. Use of entity framework core makes it easier for everyone to work with databases as we don't need to write most of the code to access data. Dealing with different aspects of the internet and network along with how attacks can happen on the internet was really fascinating for me. We also got a chance to work on the hardware "Arduino" and learnt about Machine language. Making web services using REST and SOAP, dependency injection in Spring Boot were also interesting things I enjoyed doing in this course. Applying the
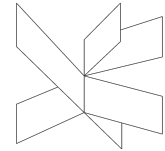
knowledge gained we had to make a distributed system which should be heterogeneous and a three-tier model. I started the project with very little idea but slowly it all started making sense. All this was possible due to motivating and helpful groupmates. Considering these requirements, we developed a system where we had different platforms and different languages used.

In my opinion, this semester was a tough challenge. It could have gone better if the classes were not online. But we put all our effort into delivering the best product. Spending a lot of time together and keeping track of every work using the SCRUM framework made it possible.
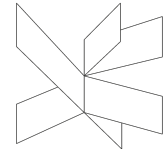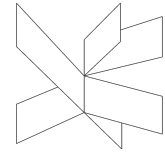
[Satish]

6. Supervision

Our team's supervisors were Troels Mortensen and Joseph Okika who introduced us to the project. Later they started supervising odd and even groups, so we mostly had Joseph to talk as supervisor. This semester was completely online. We had every class and meeting with our supervisor online on Zoom. Since we couldn't meet and discuss things physically it was not fun at all, working alone from home.

However, we still managed to arrange daily SCRUM meetings and attend every meeting with our supervisor. Our supervisor has always motivated us. The advice that we were getting from our supervisor has helped us a lot during the execution of the project. Every meeting with our supervisor is recorded as below:

Meetings	Date	Time (CEST)	Feedback

Bring ideas to life
VIA University College

| 1.	February 24, 2021	9:15	- Discussion on ideas for a project. - Project description can be started.
2.	March 10, 2021	9:20	- Add more information about the project and make a timeline. - Project description was approved.
3.	March 24, 2021	10:00	- Joseph went through some of our analysis work (requirements, diagrams)
4.	April 7, 2021	9:30	- Asked to redo the architecture diagram. - Feedback on communication technology
5.	April 21, 2021	10:00	- Architecture diagram was approved.
6.	May 5, 2021	9:00	- Proof of concept was not completely working. - Advice on it.
7.	May 12, 2021	9:00	- Proof of concept was approved.

[Mark,Dimitrian]

7. Conclusions

Semester project was an important event that summarizes every knowledge and skills gained throughout the semester through different topics and subjects. It was all about working in a group and finding an effective way to execute the project, learning from mistakes and not repeating them in upcoming days.

Our group was developing a food delivery service , following the SCRUM method.

Regarding the project, we did not manage to make a product fulfilling all the necessary requirements within the given time frame, as we broke some of its functionality during the last scrum meeting. We could have met more of our expectations if we had more time and proper planning during project initiation.
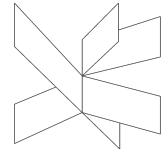
Appendices

Appendix I   SCRUM worksheet
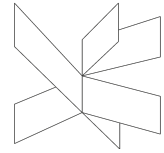
Sources

1. Team, Y., 2021. *The Best Food Shopping Apps and Websites*. [online] Your Danish Life. Available at: <https://www.yourdanishlife.dk/the-best-food-shopping-apps-and-websites/> [Accessed 2 June 2021].