Project plan

ThingsDB

Cesbit
Weert

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Author	**:**	**Daan Matheeuwsen**

Version

Version	Date	Author(s)	Amendments	Status
1	29-08-2022	Daan Matheeuwsen	-	In progress
1	08-09-2022	Daan Matheeuwsen	Changed some parts based on feedback from supervisor (Research questions, Phasing, Risk Analysis)	Under Review

Communication

Version	Date	To
1	07-09-2022	Erik van Alphen (tutor supervisor)

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1. Project Assignment

1.1 Context

This internship period I will do an internship for the company Cesbit, Cesbit is a software company that focuses on making solutions that are scalable and robust. They are an innovative company that have a big passion for Software, with years of experience they help other companies with technological problems. They have a vision that scalable and robust solutions are very important and they actively contribute to the open source community by making their innovative solutions available for everyone. Quality is more important than finishing a project as soon as possible, Cesbit always wants to deliver the best of the best first time round.

The company has created a project called ThingsDB, it's an object-oriented database with event-driven features that allows developers to store things in intuitive ways. It's a platform/product that combines the power of flexible data storage, backendless data serving, pubsub functionality and business rules implementation into a single powerful toolbox. It is also a very highly available, and scalable backend and database.

This is where my assignment comes in, I have to research how I can put together the front-end in a good, and user-friendly way by means of a flow management tool. The concrete cause for this assignment is that Cesbit thinks that a flow management tool fits very well with ThingsDB and wanted an easy to use front-end for all sorts of developers, or even non-developers, based on a ThingsDB backend. Cesbit got some inspiration from other flow management tools and they thought this was the perfect addition for ThingsDB. They believe that with their software and with an user-friendly front-end they can surpass all the other software's, as they see a lot of flaws with others that they really want to improve so the user gets a better experience. For me it's important to find out what flaws other software's have and how I could improve them for ThingsDB, it´s also important for me to find out if Cesbit is correct with their assumption that ThingsDB is indeed a good solution to build a flow control tool on.

My stakeholders for this project are:

- *Rik Lempens (product owner)*
- *Jeroen van der Heijden (Lead developer and subject matter expert)*

1.2 Goal of the project

The goal of this project is to make a user friendly front-end that is meant to be very easy to use for every software developer. Right now the interface isn't very self-evident and the goal of Cesbit is to make it easy to use, even for developers that just started. So the problem that needs to be solved is to make the interface easier to use, by using a flow control tool. The desired situation for this problem is to research other similar front-ends, find out what their strengths and flaws are and find a good and convenient way to make the front-end for this product, and eventually put together a partial front-end of my own by working in an iterative way. The benefits of this project would be that ThingsDB would offer a very quick, reliable and easy platform and this could result in a more convenient and faster way to work for developers of any calibre as well as application maintainers, BI specialists and data scientist who don't have experience with developing.

1.3 The assignment

Research how you can make the front-end of ThingsDB as optimal as possible for users.
The requirements are to do this with a flow management tool, to provide at least a MVP by means of a design with Figma (or any other tool that is similar to it) and the stakeholder of the company wants the portfolio and other researches to be written in English. It also has to be in the style of ThingsDB, it has to be highly accessible, the platform should run in the cloud and it has to be user friendly.

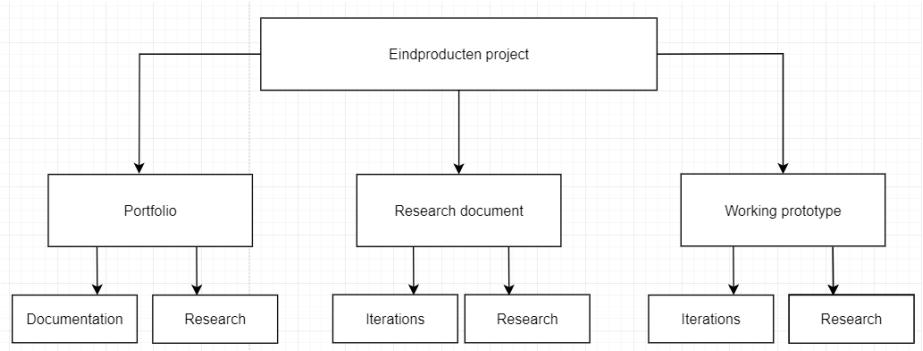
1.4 Scope

The project includes:	The project does not include:
1 Researches	1 A fully working prototype with a GUI
2 Designs (in Figma)	2 Full coded work
3 A partly working prototype	3

1.5 Conditions

Does not apply. I can use my own laptop with an additional screen the company has provided and I also get access to their programs they use to communicate or work in. All of their source code is open source and hosted in GitHub so I can work on this as well.

1.6 Finished products



1.7 Research questions

Main question: How can I make a user-friendly flow management tool by using ThingsDB

Sub questions:-How does ThingsDB work at the moment?
-What ways are there to make a flow management tool on ThingsDB?
-How suitable are similar systems?
-Are there more optimal ways to make a front-end design for ThingsDB rather than a flow management tool?
-How could the errors in the flow management tool be handled?
-How can a flow be translated into underlying code?

2. Approach and Planning

2.1 Approach

I will be following the SCRUM method, the company is familiar with this method and we have discussed this will be the most optimal way to work on this project. We have agreed to have sprints of 2 weeks with daily stand ups, talking about what we have done the day before and what we will be doing the upcoming day. I won't be having presentations after each sprint as my stakeholders think it's a waste of time spending it on making a presentation, and we think it's better by just showing what I've made and getting feedback that way. Before every sprint we will take the time to plan everything needed to be ready to work on that upcoming sprint (planning, retrospectives and such)

2.2 Research methods

Research Questions

How can I make a user-friendly flow management tool by using ThingsDB
For this research question I will use a variety of methods, I will be using the 'realise as an expert' pattern as I will be developing something using technologies and techniques that I don't know yet. The methods I will follow are the library method, workshop and showroom. This will include different researches on various platforms that already exist with library studies and best, good & bad practices. After that I will be designing a product iteratively by prototyping, sketching and ideation. And after that I will showcase my product with a peer review and co-reflection to get feedback and to see where I can still work on.

How does ThingsDB work momentarily?
To get to know ThingsDB better I will be using the solidify research method, as I'm still in the early stages of my project it'll help me understand how this system will work. I will be using the field strategy to explore the applications context. And I will be using the library strategy so I can get an overview of the guidelines that already exist.

What ways are there to make a flow management tool on ThingsDB
For this research question first I have to do research on ThingsDB itself and I have to use the library strategy to find out the possibilities that ThingsDB gives. With the knowledge the research gives me I can make a variety of prototypes to see if it´s possible to make a flow management tool on ThingsDB and what ways suite ThingsDB best. This research question will also answer the main question

Are there more optimal ways to design ThingsDB rather than a flow management tool?
To know what a good design would be for ThingsDB I will be doing a library study, available product analysis to research what kind of products that are similar look like and to see where improvement can be made. Also a best, good and bad practice to compare the designs that already have been made and rank them to get to know what possibilities there are and to see which of them are comfortable to use and which ones are bad

How suitable are similar systems?
This research question requires me to know what other platforms are similar to ThingsDB, not only is it important for me to know how similar platforms work but I will also be doing loads of research to get to know ThingsDB itself. For this I will be using the library method as I will be doing literature studies and competitive analysis on other platforms.

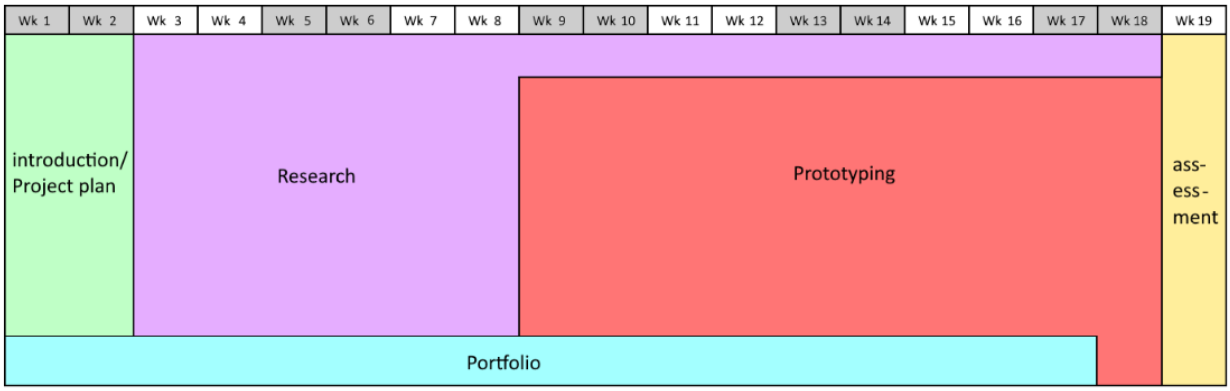
How could errors in ThingsDB be handled?
I will be using a few different methods for this research question, I will need to be doing a library study first as research is needed for me to know what the most optimal way is for the errors to be handled. I will also be doing a workshop method as I will be prototyping in various ways, and brainstorming will also be a big part of this research question because I need to think of ways the errors could be bridged.

How can a flow be translated into underlying code?
For this research question I will be following the pattern 'Choose fitting technology'. As I first need to do library studies on which technologies are available for this question. I will also be using the field method to know what kind of criteria the product needs, then the workshop method to know what working with the option is like and to see which options are most suitable for the project, I will also be using the lab method, these methods have several ways to work on them and for this research question I will be using numerous of them to try to find out how this can be done in the most optimal way.

Entire project

For the entire project I will be using the pattern 'realise as an expert', as I will be doing loads of research by using the library method first. Because I need to know what I will be working on and need to do research on how the product that I will be making will work. After that I will be innovating a prototype using the knowledge I got from the research and when this part is done I will be reflecting on what I've made with the stakeholders to see where improvements can be made, this will be going in cycles as it's an iterative process.

2.3 Breakdown of the project



This is a rough sketch on how the internship will go, it is not a final planning and it may still differ. I will work on my portfolio during the entire internship, that's why it's on the bottom for the entire period. The schedule is divided into sprints as you can see at the top with the varying gray tones

2.4 Time plan

*Every sprint involves research, prototyping and working on the portfolio.

Phasing	Effort	Start	Ready
1. Sprint 0	Orientation, getting to know the project and company	29-09-2022	09-09-2022
2. Sprint 1	Research how ThingsDB works momentarily, and who the target group is	12-09-2022	23-09-2022
3. Sprint 2	Research if there are better ways to make the front-end for ThingsDB rather than a flow management tool	26-09-2022	07-10-2022
4. Sprint 3	Research what other systems are similar and highlight their strengths and flaws	10-10-2022	21-10-2022
5. Sprint 4	Start designing the front-end with the research I did	24-10-2022	04-11-2022
6. Sprint 5	Prototyping the front-end with code	07-11-2022	18-11-2022
7. Sprint 6	Adding the specific features that Cesbit would like to have	21-11-2022	02-12-2022
8. Sprint 7	Free space in case I don't finish something	05-12-2022	16-02-2022
9. Sprint 8	Reflection and Evaluation	23-01-2023	23-01-2023

For the time plan I will be working with a Trello board, so I can manage my project and I´ll always know what I still have to do for the upcoming sprint. Trello also gives the option to invite other people, so I can invite my stakeholders so they can see what I´m currently working on in the sprint and when the sprint is done we can indicate what we want to work on in the next sprint.

3. Project Organization

3.1 Team members

Name + Phone + e-mail	Abbr.	Role/tasks	Availability
***Name**: Jeroen van der Heijden* ***Phone**: +31612798880* ***E-mail**: Jeroen@cesbit.com*	*Does not apply*	*Lead developer and subject matter expert.*	*3 times a week on location, but I can always reach out online*
***Name:** Rik Lempens* ***Phone:** +31646381880* ***E-mail:** Rik@cesbit.com*	*Does not apply*	*Product owner*	*5 times a week on location and also available online*
***Name:** Erik van Alphen* ***Phone:** 0614316140* ***E-mail:** e.vanalphen@fontys.nl*	*Does Not apply*	*Internship teacher*	*We have a chat every Wednesday, but available online*
***Name:** Daan Matheeuwsen* ***Phone:** 0610372377* ***E-mail:** d.matheeuwsen@student.fontys.nl*	*Does not apply*	*Intern*	*Available on workdays*

3.2 Communication

The stakeholders of the company have given me several options on how I can contact them. They have given me their mail, phone number but most importantly I have been added to their Slack. We have agreed that Slack will be the main form of communication when for example I'm working at home or when they aren't present on location. Furthermore when I am on location I have a desk that is very near my company supervisors so I can reach out to them whenever.
For the teacher supervisor we have agreed to have a chat every Wednesday so that I can summarize what I have done in the past week and what I will be doing upcoming week. Erik will also be giving guidance on how I'm doing every now and then so I know where I stand in the current time.

4. Finance and Risks

4.1 Cost budget

Does not apply for me, the supervisors of the company will take care of it when needed.

4.2 Risks and fall-back activities

Risk	Prevention activities included in plan	Fall-back Activities
1 Jeroen absent/dropping	Not preventable	Project can be set up differently, there is also still another supervisor
2 If it's not possible to make a flow control tool for ThingsDB	Supervisors were very confident that it is possible	The research ends, but it's still very useful for the company to know that it's not possible. I get a second assignment that I can work on
3 Not having enough knowledge about JavaScript	Learning more by practicing and doing literature studies on specific topics	Working around it by using CSS and HTML
4 Not having enough knowledge on specific topics from Media that should be included	Asking people around me for specific things that should be included	Literature studies about the topics that I should know.

5. Other

The supervisors of the company would like every research, portfolio and other documents to be in English. As the company itself is international and written in English everywhere, the only place where it's Dutch is in Slack and in the workplace.