PORTFOLIO

ABSTRACT

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VERSION 4.0

VERSION CONTROL

Version	Changes made	Date
Version 1.0	First draft of the portfolio	3.10.2022
Version 1.1	Added content to the portfolio	9.10.2022
Version 2.0	- Added projects in GitWiki, instead of just a link in the portfolio to the group repos; - Added extra information about the concept (**Empathy Map** summarising findings, **Business feasibility** on how we are targeting the users, added **core interactions**); - Removed User Journey from Interactive Media Products; - Reformulated the Design Challenge; - Improvements in the content;	14.11.2022
Version 3.0	- Added information about the testing we conducted for the project wireframes + high fidelity prototype; - Showcase the iterations that happened based on the testing results in wiki; - Started with coding - finished front-end and created the database for the backend connections; - Added information on how we validate the concept based on user interviews and testing sessions;	16.12.2022

Version 4.0	- added results from validating the concept; - Show testing results from wireframes & prototype; - Added information about the coding process and the implementations I have done; - Testing the final product + results; - Transfer from prototype to product; - The direction in which the product will go in the future (features to be added and improved); - Added advice to stakeholder; - Presenting the personal portfolio - special assignment hacker. - What I learned this semester and what I want to improve in my career.	22.01.2023

TABLE OF CONTENTS

INTRODUCTION

About me

My name is Alexandra Maftei. I am a 19 year old student at Fontys ICT&Media Design. I always considered myself a creative person, which is why I chose to follow this study. If it was not for this bachelor, I would have probably chosen to study creative writing, as I love reading and writing my own stories. I still do these, in my free time.

Passions

Probably not a surprising fact, my passions are in the sphere of design and technology. I believe that without beautiful interfaces, probably most digital products would not be as popular as they are.

Goals

My goal is to become a web developer or a digital designer (or even better, both). I want to expand my programming knowledge this semester and combine it with my creative eye. I have high hopes of finding a good internship position in front-end development at a company in The Netherlands.

Client Project LiveWall

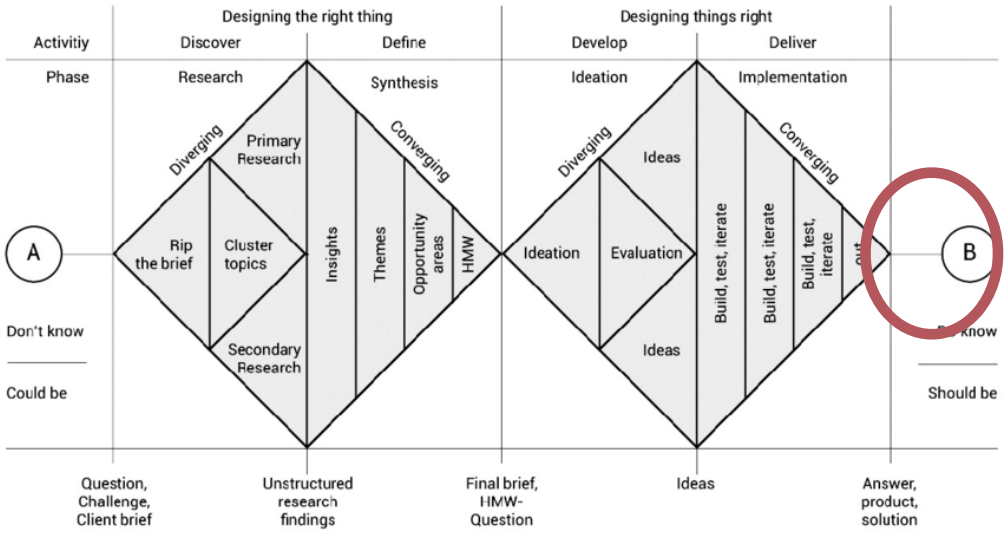
Introduction

The company we have to work with this semester is named LiveWall and deals with digital products, from web development to media products. They are guiding us throughout the process of developing a concept from scratch.
To make sure everyone is on the same page with the assignment, we agreed to sign a group charter, that clearly explained every rule in the team.

Me and my group worked on developing study case no. 2, to represent a real life activity in a digital manner. Our idea is best described as a digital substitute where young adults can interact based on shared interests.

The core interactions of this product are placing the focus on shared interests, meaning that no pictures will be available to the users, unless explicitly agreed upon both parts (talking). Another important quality of this concept is the uniqueness to which we approach the safety of our users, making sure everything that happens between them is consensual. Each person who has an account on our app benefits from a special privacy protection from our team (through the features we are continuously working on improving and implementing).

We followed the double diamond closely and made sure every stage was completed. Currently, we are in the closing stage, having decided what are other improvements we could add if we had enough resources and knowledge; we validated our concept through testing and iterations, created a coded minimal viable product, which we tested with the functionalities we have implemented.



Approach and results

The first stage in the double diamond is the discover phase. We did broad research in order to gain insights on how people dealt with social isolation and loneliness, the problem we wanted to work on fixing. We wanted to know if others also encountered the problem we identified as our own and in what way.

After that, followed the **define phase**. We were able to gather all the knowledge from the user research and define solutions to how we can help people make connections with others that share the same interests as them. In the define phase, we worked on prioritising the features we wanted our app to have, using the MoSCoW method.

In the **develop phase**, we work closely with the users in order to understand what we need to improve, and see if the concept we are working on implementing matches their expectations and needs. The focus during the testing sessions was in adapting the business feasibility to the expectations of the users, making the app as attractive as possible, so that all the resources used in creating it are used to maximum capacity. The most important question we wanted to know an answer to was "would you use this app". The *most relevant answer* we received in the second round of testing, the interactive prototype, as this is the closest version of how our application would eventually look like. We validated our concept through this sessions, and and improved the business feasibility by implementing all the features users mentioned while testing, entering the focus on the target audience, which will be the ones who will eventually start to use the app.

The users we asked were excited about such a product and the results from validating our concept - through user testing in all stages - were as follows:

- In the prototype testing stage, as it can be seen in the answers given here, all of the participants were curious about the functions and understood what they had to do, meaning we implemented the feedback accordingly and respected their requests from the first stages of discovery - the user interviews;
- After the coded product was released and we tested it, with the existing features we implemented, the participants in the testing only had small improvement suggestions, that would enhance the experience of the user; they were also asked if by now, with what they had used in the app, they feel like it can solve the problem of social exclusion in people -

to that, all of them answered YES - meaning that for us, we managed to validate the concept by identifying and solving this problem.

In the **delivery phase** we worked on creating a tangible product, first in the form of the high-end prototype, then on making *the transition from prototype to* product. We tested first the version 2 of the product, the prototype we have created in AdobeXD, and then when we were satisfied with the outcome, moved on to coding, which will have resulted in version 3.

We made the choice to create this as an application, because our target audience is mainly formed of young people aged 18-30 years old. Research shows, that these people spend the majority of their time on their phones, rather than on web browser and web applications.
We used HTML&CSS and JavaScript to code the front-end part of the product, and NodeJS express with MongoDB for backend.

Discover phase

We started by researching each case separately. After analysing the tasks and digging deeper into each subject, we decided to focus more on the second one, namely the digital substitute for a real life activity.
To make sure we fulfil the company's requirements, I helped in writing the debrief. It showed that we understood the task, and we were ready to continue with our research.

The **problem** we decided to focus on is how people dealt with loneliness and social isolation after the COVID-19 pandemic. We, as international students, felt like this had a big impact on how & when friendships were created for us, new in a foreign country, and decided it would be a good idea to research into it.

To get a better grip of what the *problem* meant for us and in which direction we could follow, we started taking steps in this direction, by using user research methods we had at hand. To find out what solutions might exist for the problem we were faced with, I moderated a brainstorming session with my team.

The easiest way to see if other people encountered loneliness was to conduct a user survey . From this, we know that people want to feel that they have someone to talk to, and this can be improved by having that person share some interests with you (maybe talking with them will make you forget about your problems and even find a new best friend). To help with summarising the information, I co-wrote a document that explained the insights and what each question meant for our process. This survey showed me that the target group of users is formed mostly out of young people, aged 18-30. Furthermore, I discovered that *more than half of the people who responded would use the app we want to develop*. This meant that we had a good starting point for validating our concept.

Knowing our audience, we decided to conduct user interviews, to better empathise with the users. We gained valuable insights and understood what social isolation meant for each individual, as well as establishing if an application targeted at connecting people with the same interests would help them in moments of loneliness and isolation. The conclusion, was that most people mentioned that having someone you can share interests with, always helps. This helped us define and model the features we would include in our application. To have a better structure of our results, I wrote a document that showcased the main ideas of our questions.

As we wanted to back-up our primary research, the team conducted library research on scientific online articles that covered the topics we were interested in: *living abroad on your own* and *life after COVID-19*. This showed us that not only was the problem we were tackling a really important one, but also important researchers were looking on ways to fix it. For a complete approach, see Research documentation.

Define phase

To have a clear idea on the target audience, I gathered all the information from the discovery phase, and added the personas. This was specifically useful, as it allowed me and my team to know exactly what expectations our users have, and start imagining the future user as a real person, allowing us to better *empathise* with the problem they were facing.

To define a research problem, we came up with 10 HMW questions, from which we chose 3 to find solutions to. These refined our design challange and allowed us to move on with the ideation process.

We wanted other people to understand what our concept meant, so we created an animated user journey. We did this, since we thought the best way to promote our concept, was by making other feel emotions for the situation many of us found ourselves in (loneliness and difficulty in finding people who share your interests). This will have served useful in our pitch and have a clear description on why people would want to use our application.

To give the client a better idea of our concept, I wrote a concept document, along with my project group. This is a different one than the research document, as the first one focuses on what the application is about and the outcomes, whereas the second one is about the process that got us where we are.

Develop Phase - Starting the ideation process

In order to have all our ideas in one place, we conducted a brainstorming session, in order to put "on table" every idea that each of us had. It made it easier that way to further on prioritise which we were going to implement and which not. For this, we made use of the MoSCoW Method.

We decided that the way in which we will approach our target audience is through promoting the app, as a virtual place where you can meet people based on just shared interests and hobbies, with no pressure of making things visual (profile pictures), unless both parts involved agree to share theirs.

To get started with visualising our ideas, I created the wireframes together with one of my team members. It helped us to have a better idea on how we will make the architecture of our app.

First user testing phase (feedback session)

To validate our first design concept, we asked students from the ICT&Media Stream to give us feedback on the user control and freedom, as well as the match between the system we were developing and the real world (*would they use such an application?*). We chose to create a mobile application, because as we found out, the majority of our target audience - young people aged 18-30 years old - spends a majority of their time on their mobile phones, rather than on a computer, so this was the most viable option, which would allow us to also generate good publicity.

To do so, we showed our wireframe sketches to potential users of our product - people aged 18-25, regardless of their gender. Since it was not an interactive prototype, but more of a first visualisation of what we were planning to implement, we guided the users through this process.

The feedback we gathered was extremely constructive and helped us come up with the second iteration of our product, the first version of the high-fidelity interactive prototype.

After having validated our wireframe concept through user testing, we decided it was time to move on to the high-fidelity Adobe XD prototype, the second iteration of our product.

Delivery phase

Second user testing phase

After creating the first version of the interactive prototype, it was time to test it again, before we started with any coding and implementation of the features. We did this with 4 users, in order to save time and make sure that the process we are following is an ascending one, allowing us to make the necessary changes, before any hard work and resources are consummated.

The details that were added and the features that were improved can be seen here.

The most important thing I wanted to know was if the user would actually use our product we were developing, and if the concept was still valid and had a purpose in the opinion of a target-audience user of our product. It was a think-aloud testing session, and the user agreed beforehand upon recording him doing the testing. He did not know any information about the design before it was presented to him, only the main idea of our app, to make friends based on hobbies and shared interests.

Creating a coded product - Frontend & backend

After having finished the last version of the high-fidelity prototype, we started to think about how we are going to put what we had created as a design, into an actual minimal viable product.

We split the code between us, and started with front-end. We decided it was best to code, using the guidelines from the inspect tool in Chrome, and model the application directly on a phone model.
I was responsible with creating the user's profile, friend's profile and the settings page (you need to log in to access these pages) in front-end, using *HTML&CSS and JavaScript*. **Please view it using inspect tool on Chrome, or a mobile phone!**

Apart from that, I did the back-end development of the product, by creating a database to log and store some users. I connected it to the front-end and made it possible to log users. To do so, I used Node.js/Express and MongoDB Atlas.

More information on the code I did can be accessed here.

Third user testing phase

The product on which we conducted this last testing version: https://connectyall.onrender.com
Compared to the other user testing sessions we conducted, this last one was more organised and had every important feature 'out there', on the pages, so the participants could actually see what to expect, in both terms of functionality and design.

We used *think aloud method* and asked the participants to browse through the app and fulfil different tasks (make a new friend, contact that friend and chat, reveal their profile picture with another user).

We did discover some weak spots in our product after testing it one last time, namely:

1. Minor changes in the responsiveness of the application;
2. Not having a feature in settings to modify the hobbies (this is very important, since if one user does not identify with the hobbies he/she has chosen, it can be hard to find connections with similar interests);
3. Not having a log out button on the profile.

These definitely impact the experience of the user, and we will make sure to fix them as soon as possible. *Until now, the only change that has been made to the final product is the responsiveness of the website*.

Feedback gathered

After the Pitch Presentation in Tilburg, me and the team were able to gather some feedback on our progress so far, and how we should approach things going on. Personally, I think the presentation went on well, but we need to make sure that in future presentations we focus more on the results, rather than the process.

We also showed our process through this project to our teachers, Maikel, Josh and Penny. We got feedback from them regarding the design of the product, key features we should focus on, as well as how to better organise our team. The gradual feedback we received, can be viewed in the FeedPulse of my group. We implemented this feedback in the 3 iterations of the product.

Our last month's work was summed up with a presentation in front of our semester teachers, mentors at LiveWall and fellow classmates.

As a personal reflection on this project, I am grateful for the new programming skills I acquired, as I now know more about what it means to connect a database to a project, and then connect it to the front-end of the application I am working on.

I believe many things could have been done better, starting with the way the team cooperated. The main issue I believe was the way we managed the time we had, and not having clear attributions to each member. Although the research part went on well and we were on time, when it came to coding, we moved slow, as we were not all working on it, and left a lot of it for the last weeks. In the end, it turned out with a good outcome, but I believe if we would have gad a better time management cooperation, we could have done more, or maybe fix some issues we did not notice now.

Since it was the first time we used GitLab in a proper manner - to make constant commits and not just store zip files - we had some difficulties with uploading the code. In the end, we ended up only making commits to the main branch, and I later found out that in order to see older versions of code (or pieces that did not work and you had to remove them - like the chat function we were planning to implement, but deleted from the main branch), you have to make secondary branches, that you later cut, but they still remain in the history of commits, as documents.
In the future, I will pay more attention to the way I make commits in Git, and make sure my future team also has that, so we can insure a good preservation of all the pieces of code that we develop.

Personal professional focus

This semester I had plans to develop a food application to filter recipes based on ingredients, diet or allergies. I created it using an API that stores many recipes and different attributes for filtering options. I did not have time to further on develop it unfortunately, as the project and the challenges didn't leave me that much time to work on it.

I conducted some primary research to help me improve my concept. This helped me understand why I need to add more functions to the app, as people have different wants and needs.

Since this idea started from a challenge in Programming, the progress I made can be accessed in Git (I did it with PHP and on Hera it did not work - only locally on the computer).

I participated also in the SpaceTeam prototype workshop. There, we had to play a game first with a team, formed of other classmates,

Personal Portfolio UI

As a personal project this semester, I chose the Hacker challenge, to develop a personal website, where I would store my work and assignments. I chose to do this one in particular as it would also help me next semester, when I will be applying to internships in the field of front-end programming (most likely).

For this assignment I used HTML&CSS, JavaScript, some React, NodeJS and MongoDB.

It was a bit hard to understand how I could use React, as it works on a component-based system, and my website is a one pager, where I don't reuse that many pieces of code, but I tried to do some small functions, and build the rest - implementing the API & connecting the database - on top of the React app.

I used an existing API (https://rapidapi.com/divad12/api/numbers-1/) and used it to display a random fact each time the page is refreshed.

To store my projects, I used MongoDB and connected it using a NodeJS express server. I created a simple database where I stored the links to my GitHub repo. I doesn't do much in terms of difference for the UI (it could have been done with a simple href), but for me, I learned how to connects the database from the node server, to the react app.

Career day in Utrecht - HBO-ICT Job & Student Event

On the 7th of October, I attended an event in Utrecht, targeted at students from the ICT field, looking for an internship. Although I will start my official internship in September 2023, I was curious about what options there were for ICT&Media students, what are the requirements and how the application process looked like. I was happy to see that there are a lot of media agencies looking for internship students.

I also attended a workshop on how to create a good LinkedIn profile and write a letter of motivation, offered by Swisscom, a development company in Rotterdam. It was a nice opportunity, as I connected with many recruiters that day, and it helps me follow closely when the internship opening will be available for my desired time period.

Career day at Fontys

On 10th of November, I attended Fontys career day in Eindhoven. Even though I had already participated in such an event a month before, I wanted to see what other companies had to offer, so I could expand my network when applying to internships. I talked to people at Philips, and although they did not have internship opportunities for media students specifically, it was nice to see what other options are there - I am currently expanding my knowledge learning other things too, apart from the ICT&Media classes.

What did I learn this semester?

This semester, the most valuable thing I learned is how important is to manage tasks in a team, and keep friendship apart from a more professional environment - such as a school project. In future projects, I will also make sure to complete everything at least two weeks before the deadline, as there are many minor (but important issues) that can happen in the last moments, especially when you are working until the last day of the deadline.

In terms of more technical personal knowledge, I believe I have learned a lot, from programming to 3D modeling. I improved my JavaScript knowledge and way of writing code, as well as understood NodeJs and learned how to work with a database. I also started learning a new framework, React.

I was introduced this semester to the world of 3D modeling, and although it is not easy, I like it and I truly want to make time to refine my skills and learn more. I started from creating small models (a phone) to sub-d modeling a rubber duck. It was nice to learn it, and maybe in the future I will find a way to include it in my work.

For a more detailed version of my reflection: semester reflection.

Burden of proof

Learning outcome	Self assessment	Proof
Concept	Proficient	Concept
Interaction design	Proficient	Interaction Design
Interactive media product	Proficient	Interactive media product
Transferable code	Proficient	Transferable code
Professional iterations	Proficient	Professional iterations
Advice to stakeholder	Proficient	Advice to stakeholder
Personal Prof. Focus	Proficient	Personal Prof. Focus