**Competence Document**

**Nina Taken-Koevoets**

A picture containing indoor, hair

Description automatically generated

**1. Persona**

Hello! My name is Nina Taken-Koevoets, I am 23 years old. I am originally from a small town in Brabant called Baarle-Nassau, but I moved to Breda after high school. I got married recently and moved to Etten-Leur with my husband.

For my first 3 years I attended high school in my hometown at a school called De La Salle, however since this was a MAVO school I had to switch schools for the remaining years. For those years I attended a different school in Breda called Markenhage where I graduated with a HAVO diploma with the addition of having finished English on VWO level.

After graduating I tried Bio-medical Laboratory Research as well as International Business educations but found that neither one was the right fit for me. One year ago, I started the ICT education at Fontys Eindhoven where I just successfully finished the 2nd semester of ICT & Software. Even though I would never have thought I would be where I am right now if you would have asked me 5 years ago, I couldn’t be happier to have finally found the right fit.

In my spare time, when I’m not coding, you can often find me with my nose in the books, trying new hobbies or teaching myself about new interests. However, when I am working on a project, I often choose to spend most of my free time working on that. This is consistent with my personality type, which is INFJ-T or Advocate. According to the test, these are an advocate’s key characteristics:

**Compassionate**: With their strong sense of intuition and emotional understanding, INFJs can be soft-spoken and empathetic. This does not mean that they are pushovers, however. They have deeply held beliefs and an ability to act decisively to get what they want.

**Helper**: While they are introverted by nature, people with this personality type can form strong, meaningful connections with other people. They enjoy helping others, but they also need time and space to recharge.

**Idealist**: What sets the INFJ apart is their ability to translate their idealism into action. They don't just dream about changing the world—they make it happen.

**Organized**: People with this personality type like to exert control by planning, organizing, and making decisions as early as possible.

**Both emotional and logical**: When making decisions, INFJs place a greater emphasis on their emotions than objective facts. But this doesn't mean they see the world through rose-coloured glasses. INFJs understand the world, both the good and the bad, and hope to be able to make it better.

**Strengths**

* Sensitive to the needs of others
* Reserved
* Highly creative and artistic
* Focused on the future
* Values close, deep relationships
* Enjoys thinking about the meaning of life
* Idealistic

**Weaknesses**

* Can be overly sensitive
* Sometimes difficult to get to know
* Can have overly high expectations
* Stubborn
* Dislikes confrontation

This personality test is very accurate for me. I think all the characteristics mentioned above also apply to me. The only thing I could note is that since I have ADHD the need for perfection can be extra strong and while I am good at planning and organizing, following the planning doesn’t always work out the way I want it and my time perception can be off on some points.

**2. Context**

For the group challenge I would like to work on a project involving design. I would prefer to work in context of mental- or personal healthcare, art, or education, because it is important to me to make a positive impact with my work and projects.

For my ‘Freaky Friday’ project, I would like to create a mobile application linked to a plant care sensor. The purpose of the application will be to educate children as well as people of any age interested in biology or plant care.

**3. Project / Challenge description**

This semester I have chosen ‘DDW: Dynamic Building & Identity’ as my group challenge. We are working together with Studio Krom and HyperCulture to create an interactive installation for Dutch Design Week, which will be displayed in the InnovationLab in Eindhoven. In order to give the building and identity which relies on the visitors, there will be 3 stations in the halls. One for emotion, one for movement, and one for sound. The software and technology for this will be supplied by Studio Krom and the style design will come from HyperCulture.

My goal for this project is to learn a lot about user interaction and about working with a bigger team on a short deadline. I chose the sound station as the subject for my project. Throughout this project I learned how to work with P5.js to create the visualizations of the input. To improve the interactions, I put my project on display in the TQ building in order to gauge other students reactions and ask them what they thought about it.



**4. Competence profile**

**Current profile**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Managing | Analysing | Advising | Designing | Realising |  | Future-Oriented Organisation | Investigative problem solving | Personal Leadership | Targeted Interaction |
| User interaction |  |  |  |  |  |  |  |  |  |  |
| Business processes |  |  |  |  |  |  |
| Software |  |  |  |  |  |  |
| Hardware |  |  |  |  |  |  |
| Infrastructure |  |  |  |  |  |  |

**Intended development v1**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Managing | Analysing | Advising | Designing | Realising |  | Future-Oriented Organisation | Investigative problem solving | Personal Leadership | Targeted Interaction |
| User interaction |  |  |  |  |  |  |  |  |  |  |
| Business processes |  |  |  |  |  |  |
| Software |  |  |  |  |  |  |
| Hardware |  |  |  |  |  |  |
| Infrastructure |  |  |  |  |  |  |

**Final development**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Managing | Analysing | Advising | Designing | Realising |  | Future-Oriented Organisation | Investigative problem solving | Personal Leadership | Targeted Interaction |
| User interaction |  |  |  |  |  |  |  |  |  |  |
| Business processes |  |  |  |  |  |  |
| Software |  |  |  |  |  |  |
| Hardware |  |  |  |  |  |  |
| Infrastructure |  |  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Level 1 | Level 2 | Level 3 |

**5. KPI-table with proof**

Design a concept for the DDW installation  
Use available technology and stakeholder requirements to design a concept for the installations.

Create software program for the DDW installation  
Create a program based on the design concept. Make use of the available software and style delivered by the other teams.

Plan the personal project  
Create a project plan containing research, analysis, and advice for the personal project.

Gather user requirements  
Create a user requirements specification document based on the project plan.

Design a concept for the Guitar Festival   
Use stakeholder requirements and restrictions to design a concept for the interactive installation.

Create a software program for the guitar festival  
Create a software system based on the application design using previously chosen technologies.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **KPI** | **Proof** | **Rating** |
| **1.** | **U2.1 Advise** Provide well-founded, concrete advice on the interactive techniques and/or interactive concepts to be used. | Design a concept for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/211871?module_item_id=860095> |  |
| **2.** | **U1.1 Design**  Translate the advisories into a simple user interaction with standard prototyping technique. | Design a concept for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/211871?module_item_id=860095> |  |
| **3.** | **U1.1 Manage&Control** Validate important decisions, results and insights related to an interactive design in an iterative process. | Design a concept for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/211871?module_item_id=860095> |  |
| **4.** | **U2.1 Realisation** Realise the interactive design with various tools and techniques. | Create software program for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/212122?module_item_id=861435> |  |
| **5.** | **S2.1 Realisation** Build and make available a software system that is comprised of several sub-systems while using existing components. | Create software program for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/212122?module_item_id=861435> |  |
| **6.** | **S2.2 Manage&Control**  Apply methods and techniques to manage a software development process and safeguard the quality. | Create software program for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/212122?module_item_id=861435> |  |
| **7.** | **H1.3 Analysis**  Compile (non)functional requirements and acceptance criteria for a computer system in, for example an embedded or AI system. | Plan the personal project <https://fhict.instructure.com/courses/12351/assignments/213606?module_item_id=880746>  Gather user requirements  <https://fhict.instructure.com/courses/12351/assignments/213607?module_item_id=880752> |  |
| **8.** | **U1.1 Advise**  Give advice on the interaction design that fits the assignment, client and user needs and previous acquaintance of these. | Plan the personal project <https://fhict.instructure.com/courses/12351/assignments/213606?module_item_id=880746> |  |
| **9.** | **S1.1 Analysis**  Collect and validate functional requirements for a software system with one stakeholder according to a standard method. | Plan the personal project <https://fhict.instructure.com/courses/12351/assignments/213606?module_item_id=880746> |  |
| **10.** | **S2.2 Advise**  Provide advice on a section of the architecture or a limited software system. | Plan the personal project <https://fhict.instructure.com/courses/12351/assignments/213606?module_item_id=880746> |  |
| **11.** | **S2.1 Analysis**  Carry out a requirement analysis for a software system with various stakeholders, while taking into account the quality properties including security. | Gather user requirements  <https://fhict.instructure.com/courses/12351/assignments/213607?module_item_id=880752>  Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **12.** | **U1.2 Analysis**  Taking inventory at the client and of the user needs and translating these into IT solutions. | Gather user requirements  <https://fhict.instructure.com/courses/12351/assignments/213607?module_item_id=880752> |  |
| **13.** | **U2.2 Advise**  Make proposals about the realisation choices, such as the technologies to be used, while keeping the users and company context in mind. | Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **14.** | **U2.1 Design**  Translate the advisories into a design of detailed user interaction with various prototyping techniques. | Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **15.** | **S2.3 Advise**  Give advice on the use of prototypes in validating the requirements. | Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **16.** | **S2.1 Design**  Compile a design for a software system while taking into account the use of the existing components and libraries. | Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **17.** | **U1.1 Realisation**  Realise and qualitatively test simple interactive products or services on the basis of an interactive design whereby use is made of accessible tools, design guidelines and/or house style. | Create a software program for the guitar festival <https://fhict.instructure.com/courses/12351/assignments/214073> |  |
| **18.** | **S1.1 Realisation**  Build, test and make available a simple software system. The set-up, filling and querying of a data base is part of the software system. | Create a software program for the guitar festival <https://fhict.instructure.com/courses/12351/assignments/214073> |  |
| **19.** | **S2.1 Design** Compile a design for a software system while taking into account the use of the existing components and libraries. | Create a software program for the guitar festival <https://fhict.instructure.com/courses/12351/assignments/215039> |  |
|  | **Professional Development** | | |
| **1.** | **Future-Oriented Organisation 2.1** You analyse the environment and stakeholders of the assignment. |  |  |
| **2.** | **Future-Oriented Organisation 2.2** You substantiate the added value of a solution. |  |  |
| **3.** | **Future-Oriented Organisation 2.3 You are familiar with ethical standards and involve social-ethical issues in the judgements.** |  |  |
| **4.** | **Future-Oriented Organisation 2.4** You will independently make an inventory of sub-tasks, plan and monitor time, money, quality and ethics of the execution of the work. |  |  |
| **5.** | **Future-Oriented Organisation 2.5** You recognise opportunities and risks and ensure future-oriented implementation, commissioning and management. |  |  |
| **6.** | **Investigative Problem Solving 2.1** You determine the direction of the solution for a given problem and choose an appropriate approach. |  |  |
| **7.** | **Investigative Problem Solving 2.2** You solve problems methodically and creatively. | Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **8.** | **Investigative Problem Solving 2.3** You actively look for alternatives. | Plan the personal project <https://fhict.instructure.com/courses/12351/assignments/213606?module_item_id=880746> |  |
| **9.** | **Investigative Problem Solving 2.4** You critically go through your own chain of reasoning. |  |  |
| **10.** | **Personal Leadership 2.1** You present yourself professionally. |  |  |
| **11.** | **Personal Leadership 2.2 You are being independent.** | Create software program for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/212122?module_item_id=861435>  Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **12.** | **Personal Leadership 2.3** You take others with you in your own development. |  |  |
| **13.** | **Personal Leadership 2.4 You actively ask and give feedback.** |  |  |
| **14.** | **Personal Leadership 2.5 You strengthen your learning ability.** |  |  |
| **15.** | **Personal Leadership 2.6** You describe your professional talents, development ambitions and which professional field you aspire to. |  |  |
| **16.** | **Targeted Interaction 2.1** You take into account different stakeholders in the assignment. | Design a concept for the DDW installation <https://fhict.instructure.com/courses/12351/assignments/211871?module_item_id=860095>  Design a concept for the Guitar Festival <https://fhict.instructure.com/courses/12351/assignments/214072?module_item_id=884650> |  |
| **17.** | **Targeted Interaction 2.2** You ensure the desired impact and execution of communication. | Create a software program for the guitar festival <https://fhict.instructure.com/courses/12351/assignments/214073> |  |
| **18.** | **Targeted Interaction 2.3 You actively seek enrichment in the assignment.** |  |  |
| **19.** | **Targeted Interaction 2.4 You consciously build up trust when working together.** |  |  |
| **20.** | **Targeted Interaction 2.5** You work together in such a way that everyone's strengths and learning needs come into their own. | Create a software program for the guitar festival <https://fhict.instructure.com/courses/12351/assignments/214073> |  |

**6. Sprint retrospectives**

Sprint 1

This first sprint my focus was all on design and working with stakeholders. After the first meeting, where the other teams explained what we were going to be working on, I got started right away with creating my concept.

When I came up with my idea and ran it by the stakeholders and coaches, I got permission to work it out further. This led to me creating several designs for possible visualizations of the different ideas. The process of creating visual designs was new to me and it took some tries for me to find my flow with it. Luckily, I am teamed up with a student from a Media background so we can help each other figure out things.

After presenting my ideas to the stakeholders and coaches, I was told to narrow down my focus and start working on a prototype to show them. I then started learning how to work with p5.js and worked on a prototype to show at the sprint demo.

While this sprint was a short one, I feel like I hit the ground running and got a solid start with this project. The constant feedback from both the coaches and stakeholders is a huge help because it keeps me focused on what is important instead of putting a lot of time in things that won’t end up being used. For the next sprint I would like to refine the animations more, start working on the machine learning aspect, and create a first test installation.

Sprint 2

The second sprint was all about optimizing. With the concept decided, the next step was to create prototypes and update them based on the feedback from the coaches and stakeholders. The design I showed at the previous sprint demo had a few good aspects. It used both the volume and the frequency of the sound input to change the visuals. One way to improve it would be to make it more dynamic, currently the shapes had a set position on the screen.

In order to satisfy the stakeholders and incorporate the feedback I decided to dive a bit deeper into P5.js and the way the canvas worked. I ended up using some math to create a central circle from which the shapes would move away and off the screen. This created a nice 3D effect which really improved the look of the whole project. At this point I found that the station wouldn’t benefit from adding the machine learning aspect, which I then recommended to the stakeholders.

Because the stakeholders agreed with my recommendation, I decided to put my focus on the interaction next. After discussing it with both coaches, I started trying to find ways to make the design. I tried using different color combinations and changing the composition of the canvas but eventually I found a way to rotate the canvas and this was exactly what the project was missing.

This sprint was super productive for me. I learned how to work together with a team to create the final product and I learned when to decide to incorporate feedback or listen to myself. After all this rapid prototyping I feel more secure in abilities because I felt like I had a good grip on my code and was able to change things easily based on feedback.

Sprint 3

The third sprint was a more hands on period. The project was now mostly finished and ready to be tested in the building. After deciding on what microphone to use for the station, I was able to make the final changes to the program to ensure it ran as expected in the assigned location.

Setting up the sound station and being able to see it in action the next week was an amazing experience. Not only because it was a good way to wrap up the project but also because it taught me that I really enjoy seeing the positive effects of my work. This is something I will keep in mind when I look for an internship.

The next step was to finalize documentation and start working on a plan for the last 2 sprints. I decided to use this time to research possibilities for a next project. I established some criteria for this project:

- create a scalable webapp that can be used on mobile phones

- connect the application to a piece of hardware

- educational context

Going into the next sprint I will take these criteria and write a project plan as well as a user requirements specification document to get started on this project. I hope to be able to produce a good prototype by the end of the semester.

Sprint 4

This sprint has turned out very differently from what I expected at the start of it. Instead of putting my full focus on the personal project, I decided to join another group challenge. This was an interesting experience as I was joining an already established project halfway in. This meant that the initial research and design choices were already made. I jumped right in, trying to learn as much as possible about the project and seeing where I was able to help out.

Even though the group had taken some good steps before I joined the project, there was not a lot to show for it yet. So, my goal became to help create an actual prototype that could be delivered to the stakeholder. It was not easy for me to find something substantial I could add to the project as there was not a lot to do on the software side of the project and the work was already divided before I joined. This had me worried a bit at the start, but I decided to plan a meeting with my coaches to bring up those concerns. As a result, I decided to create a project concept proposal of my own along with the work I was already doing with the group.

While this was a relatively short sprint, I feel like everything I need to finish the semester is in place or in progress. From the peer feedback I asked for from the project group I gather that they are happy I joined them, because I helped get them going and gave some useful direction that was needed.

The next steps for this semester will be mostly about finishing up all current projects and present a good final prototype in the last sprint delivery demo.

Sprint 5

The final sprint was all about preparing for the last demo of the semester. Because of some issues with Django related to the built-in libraries and functionalities, the final prototype wasn’t coming together as well as we hoped. To speed things up, I decided to work on the WebSocket connection between the hardware and software components. I created a server script in Python which was able to communicate with a microcontroller as a POC. This worked very well, and it seemed like all there was left to do was to implement the WebSocket client connection in the software project.

Sadly, things were not as easy as they seemed. To connect the Django project to the WebSocket server, we needed to use the WebSocket library called Channels. Due to a problem, specific to the existing project, we were not able to connect to this library. As this was the only thing standing in the way of having a final, connected prototype we asked every coach at TQ with relevant experience, put the entire internet upside down, posted on StackOverflow, and even asked ChatGPT. None of this turned out to be helpful in resolving the issue, and after asking for advice we decided to stop digging into the problem and instead focus on what we could do to deliver a prototype for the demo that would show the flow of the installation even without the hardware connection.

While this was not the ideal outcome, it was the best decision for our situation and scope as the stakeholders were not interested in the code but only in the prototype experience and the concept. For me personally, this was a hard choice to make as I hate to leave problems unsolved and because the POC connection did work.

Overall, this sprint was a bit more hectic than expected but it did teach me to think critically and to avoid tunnel vision when working on a problem.

**7. Evaluation and Reflection**

This semester has certainly had it’s struggles. During the first part of the semester, I worked on the Dutch Design Week project and for the second part I worked on the Guitar Festival project. This meant that my semester was structured differently than usual. Both those projects had a very different way of working which helped me realize what does and doesn’t work for me. During the DDW project, we all worked on our own installations while being constantly in touch with the stakeholders for the development process. This was very beneficial for me because it made me continuously work on advancing and improving the project while incorporating the feedback I received from coaches and stakeholders. Alternatively, during the Guitar Festival project everyone was working on a very small software system together and there weren’t any deadlines or much planning ahead. This was not a very productive environment for me, and it made everything much less clear. To solve this, I tried bringing some structure and clarity to the group, but it felt like it was too little too late. While it did get everything started, we might’ve gotten a more complete final product if it was more structured from the get-go.

When it comes to innovation, I learned a lot during the DDW project. Coming up with an interactive installation that will be displayed at the Dutch Design Week left a lot of room for me to get creative with coding. I did not initially think that a design challenge would be exactly what I wanted to do but visualizing audio input turned out to be a perfect combination of my interests. For the guitar project I initially didn’t think there was a lot of room for innovation which led me to come up with a challenge of my own within the requirements of the project. I am very glad I ended up challenging myself more because it gave me the opportunity to design another concept from scratch and really flex my brain muscles.

Resilience is not particularly where I shined this semester. While I do feel that I put in a lot of effort and energy into my work, I don’t feel like it shows in the results. During the final sprint it became clear to me why this is. I did not challenge myself enough with interesting and meaningful projects this semester compared to the last. I notice that I really get a lot of motivation from doing something important to me.

**8. Feedpulse**

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Graphical user interface, text, application, email

Description automatically generated

A screenshot of a computer

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