

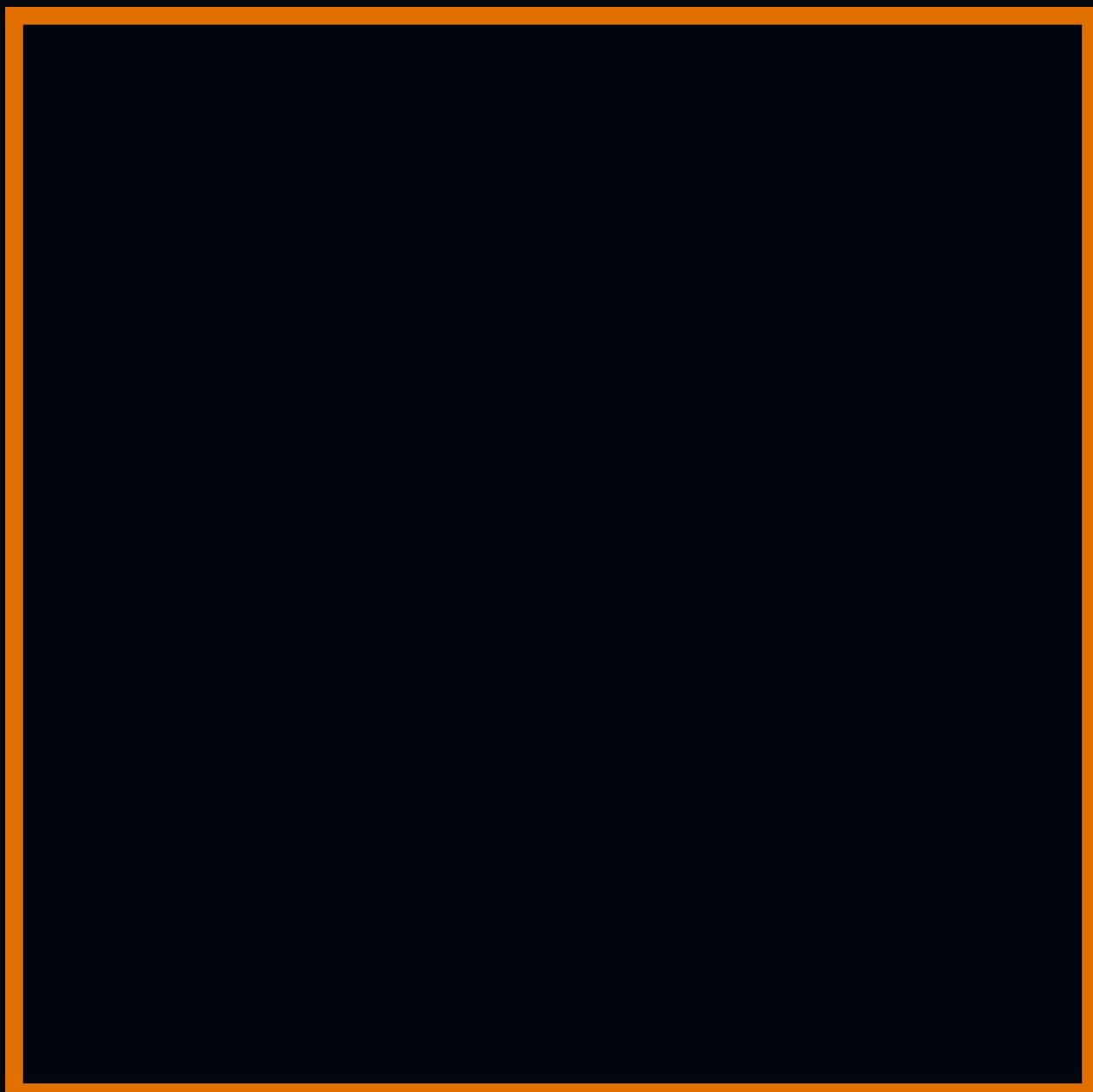


WYZARD'S ARK

# Intern Report

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27 / 08 / 2024



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# INTRODUCTION

During my first internship at SiNTLUCAS, I had the opportunity to work for the Royal Netherlands Army, which gave me insight into a unique work environment. I developed my technical skills and collaborated with experienced interns in game development.

Beyond technical knowledge, I gained valuable insights into military processes and personal development. This internship improved my communication, problem-solving abilities, and overall effectiveness. It was a meaningful experience that contributed to both my professional and personal growth.

This report focuses on my personal development, game development projects, and side projects, rather than technical details about military knowledge or training.

My name is Bon Cao, you are reading ‘Intern Report’. I hope you enjoy reading it.

*You cannot intern at a  
company without knowing  
what it does—even after  
your internship.*



The Serious Game Centre (SGC) falls within the defence and education sector and focuses on the development and implementation of innovative simulation and training solutions.

The SGC's mission is to use cutting-edge technologies to create a realistic and interactive training environment that helps military personnel best prepare for complex and challenging situations. The SGC's vision includes continuously improving simulations by using the latest technological developments.

The SGC's primary customers are the army. This close collaboration allows the SGC to develop products that meet specific operational requirements and contribute to the units' mission.

*During my internship, of course, there is no doing nothing. There is always plenty to do, but what do I do when I encounter challenges in my tasks? How will I tackle them?*

No  
Task  
Too  
Difficult



To achieve these goals, I worked on several game development projects and integrated 3D models into dedicated simulations. During these projects, I not only got the chance to implement and optimise code, but also to develop a deeper understanding of the processes and challenges within game development.

These experiences helped me turn technical knowledge into practical solutions. Moreover, I learned to apply valuable insights shared by experienced trainees. Thanks to their guidance and feedback, I learned to analyse problems from different angles and come up with more efficient solutions.

One of the most important lessons I learnt was how to break down large problems into smaller, manageable parts and tackle them systematically. This insight not only improved my approach, but also led to a new appreciation for the complexity of game development and the creativity needed to overcome these challenges.

During my internship, I had the unique opportunity to participate in training sessions with soldiers from different units. I helped set up stations and made sure everything ran smoothly. This experience enriched my understanding of technology within the military sector and gave me a broader perspective on **teamwork**, **discipline** and realistic simulations.

The combination of professional and personal goals helped me grow as a professional and as a person. I learned the importance of clear communication, proactive **cooperation** and handling stressful situations. Participation in military training reinforced my self-control and focus.

In short, my internship provided a learning environment in which I developed technical skills, gained practical experience and further grew my passion for the profession.

*Doing an internship is not just about completing assigned tasks, but also a chance to develop yourself in a new environment. I am no exception to this.*

Split in two

# Learning Goals

My focus was on the process behind video game development. Specifically, I worked on:

- Improving the user **experience (UX)**.
- Designing and developing a consistent and clear **user interface (UI)**.
- Creating a complete and functional **menu** that fits within the game interface.
- Learning how a game is structured, conducting research, and bringing everything together in a **Game Design Document**.

I wanted to not only learn how to implement technical solutions but also understand how to make a game interface visually appealing and intuitive for users.

# PERSONALLY

For my personal development, I focused on practical skills and professional behavior:

- **Note-taking:** During important conversations and meetings, I learned to record information in a structured way to ensure nothing was forgotten.
- **Problem-solving:** I trained myself to approach concrete problems by first sketching or describing them in detail.
- **Written communication:** Since my internship supervisor was often not in the office, I learned how to write effective emails to communicate clearly and document agreements.

These goals not only strengthened my technical skills but also helped me work more independently and in a more structured manner.

After feedback from my internship supervisor, I realised that I still needed to improve a lot to achieve my personal goals. One of my weaknesses was **communication**. During Project Play in the 2nd year, I noticed how important it is to communicate with colleagues in a timely and complete manner. Without this, the work process can be delayed.

Previously, I thought direct contact with my internship supervisor or client was the best approach. But due to their busy schedules, this was not always possible, and waiting often cost me precious time. Therefore, I decided to switch to e-mail.

Email proved to be an efficient way to communicate, especially since most people check their inbox daily. This not only taught me how to write emails professionally, but also ensured that my queries were answered in a timely manner. My internship supervisor even encouraged me to send emails regularly, as they would always be read, even if it sometimes took a while.

# TAKING NOTES, NOTES, NOTES

Besides developing my skills, I learned to take note of important things. Often, good ideas come when I am not working, and I usually forgot about them. Therefore, I took a small notebook with me to write down everything I thought was important. My internship supervisor encouraged me to always have a notebook and pen handy during client meetings.

In the beginning I found this cumbersome, but it helped me a lot to remember important details. Now I regularly check my notes. I also use [Notion](#), a programme in which I can organise notes. The checklist I made for this internship report is a good example of this. Without Notion, it would have been difficult to make such a detailed report.



After the first mid-term assessment, my results for my learning objectives were average - just acceptable. After much effort and focusing on my goals, my final assessment at the end of my placement was raised to good. This was a significant improvement, especially as I focused more on aspects I was less strong in, such as communication and drafting a GDD.

Personally, I am satisfied with this result. However, there is still a lot of room for growth, as this was my first six-month internship in a new environment. I still have a lot to learn and achieve. With my current results as a foundation, I want to build further and hope to achieve more goals in the future.

*Six months of internship, of course, did not mean sitting still. I was constantly realising promising projects and participating in special trainings, from small to large.*

# FOR YOUR EYES ONLY

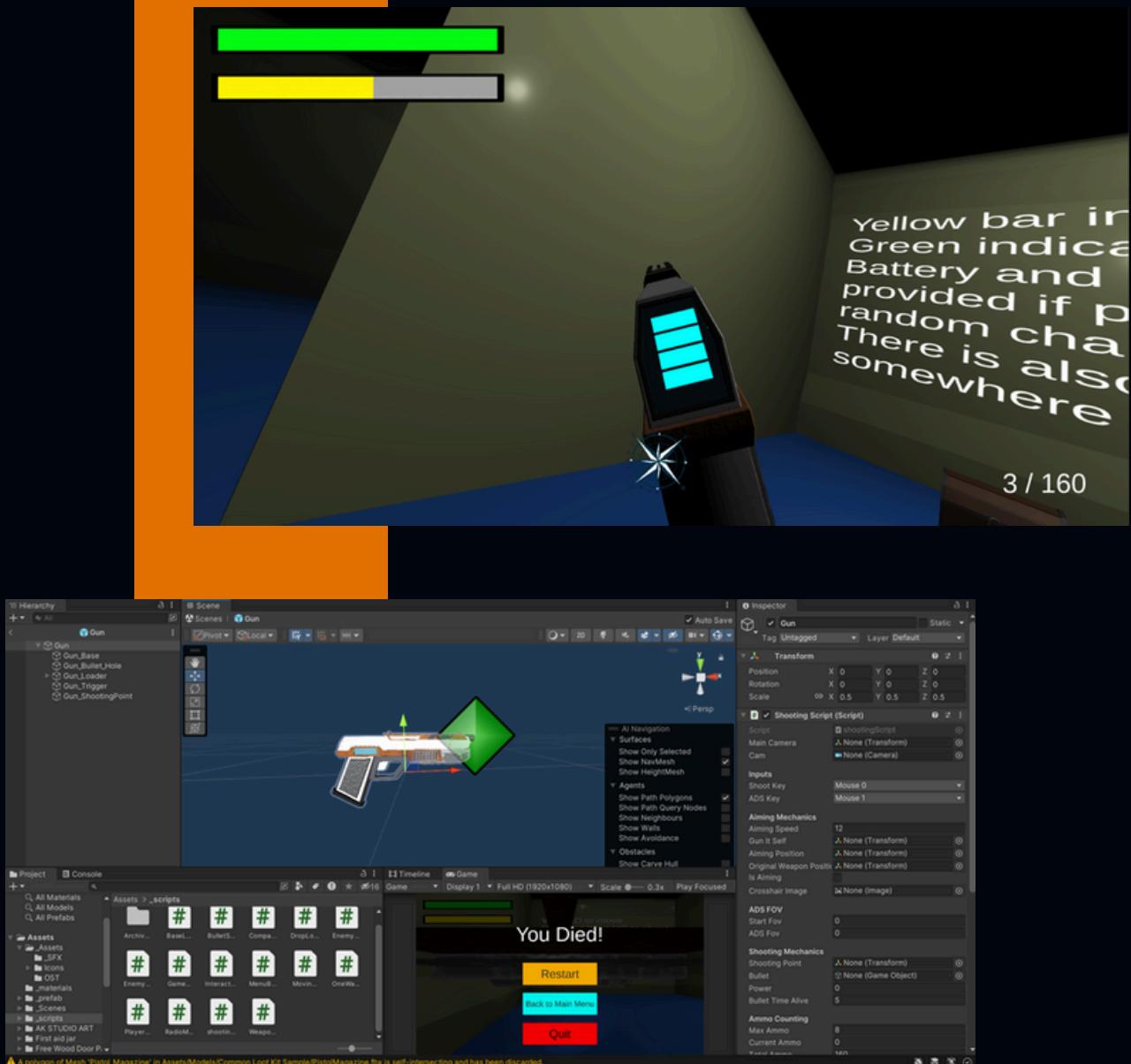
# SHOW YOURSELF

'Show Yourself: Codename Hyphen' was my first project during my internship at Defence. With a deadline of about 3 weeks, I was given the task of making a game with the only requirement: a maze with moving walls.

I made the best use of the resources I had and my existing knowledge and took inspiration from other games. Although there were no animations and the characters were just basic shapes in Unity, my focus was on performance and gameplay rather than detailed graphics.

The Hyphen project focuses on a basic shooter/survival game. The player has a gun and a torch at his disposal. During the game, the player must try to find a key to escape from the maze, while fighting against the clock to collect batteries for the torch. In addition, he has to defend himself against enemies that keep respawning





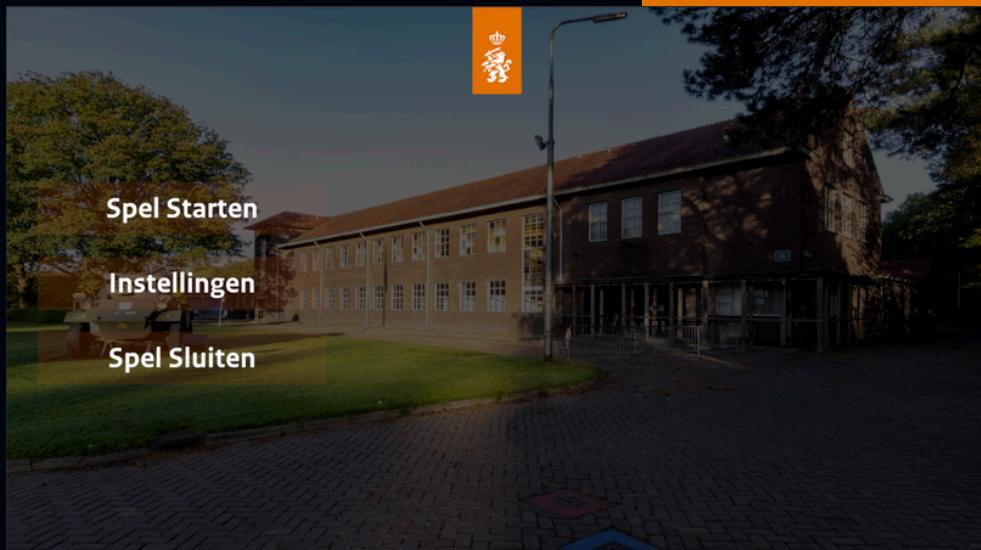
My personal goal in doing the project Hyphen was to learn how to merge different ideas to create a complete game. I also learnt how to research and develop a Game Design Document (GDD) so that players have a clear overview of how the game works, where the ideas come from and why certain ideas were or were not chosen during the development process.

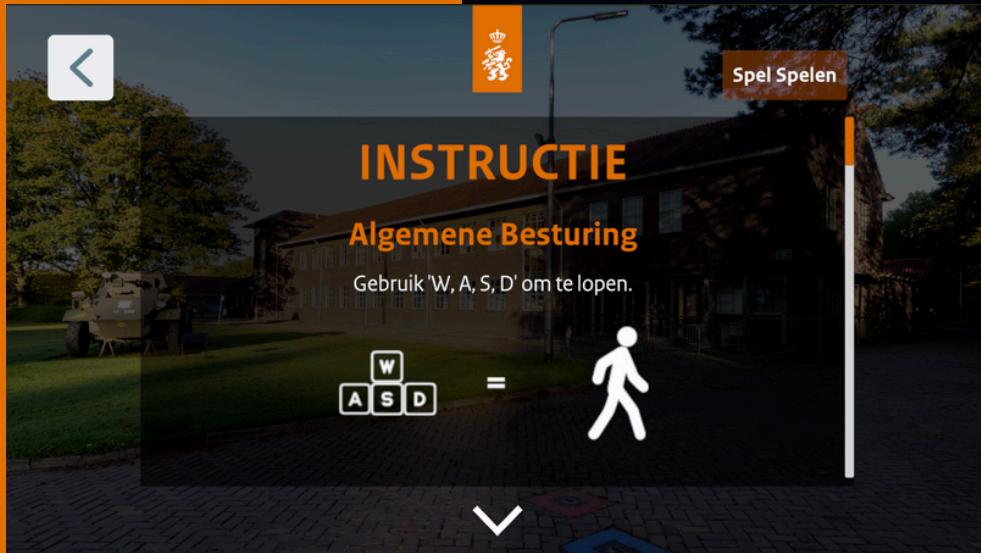
# THE A'FOORT EXPERIENCE

The next project I want to discuss is **project Amersfoort**. This was the main project during my internship: a walking simulator that virtually reconstructs the Bernhard Barracks in Amersfoort. The main purpose of the game is to provide information and offer players a virtual experience of the barracks.

The aim of project Amersfoort is to give new trainees a digital tour of the barracks, giving them a general and detailed view of the place, and from there they can further improve the simulation and add more mechanics/details to improve the play experience and sense of reality.

In the Amersfoort project, I was assigned the role of project leader. Together with three other developers, we worked on a **1:1 reconstruction** of the Bernhard Barracks in the game. We placed tanks, monuments and buildings in their correct locations within the barracks.







During this project, I learnt a lot, not only about the technical aspect of game development, but especially about team **collaboration**, **effective communication** and **leadership**. Dividing tasks and coordinating team members were valuable experiences that strengthened my leadership skills.

My main task in the Amersfoort project was to develop the **UI**, focusing on the player experience. I was responsible for the design and development of the game's menu, making sure it was simple but intuitive. Since the Amersfoort project did not require complex mechanics, the client suggested we add some complex ideas to make the game more interesting and give us some challenges.

# MORE THAN JUST OFFICE WORK

## International Experience

An important part of my internship is providing support during major **exercises**, both nationally and internationally. This year, I signed up to participate in international support in **Germany**. So far, I have contributed to such large-scale exercises twice during my internship.

Bearing this responsibility has not only further developed my **technical skills**, but also my ability to work under pressure and respond efficiently to challenges. This experience has shown me the importance of laying a solid foundation for any training or exercise so that the parties involved can fully focus on their tasks.

On 18 December, together with my internship supervisor, I had a second **meeting** with my mentor. Below is a summary of the main points raised during the conversation.

# FORWARD TO THE PAST

- We concluded several areas that can be further improved, such as enhancing communication and effectively conveying and receiving information. Another point of focus is responding to emails to acknowledge receipt of the message.
- Another important improvement is renewing the method of communication. Instead of solely seeking direct contact, the use of emails is encouraged.
- Since some goals have not yet achieved the desired results, no new goals will be added until the end of the internship period.
- During my internship, I worked on large projects assigned by my internship supervisor as well as personal projects to challenge myself. After discussions, I was allowed to work on my own projects on Fridays, and focus on assigned tasks for the rest of the week.

# AN INVISIBLE MIRROR

Doing an internship is fun, but what did I actually learn and what does my internship supervisor think about my personal development and what does my internship supervisor say about this?

# YOU FELL AND YET YOU GOT UP

During my internship, I made many learning experiences, from communication to leading a team. Despite the challenges and difficulties, I learnt valuable lessons and notice that I have grown significantly since the beginning of my internship.

The biggest change was my way of **communicating** with others. I switched from traditional conversations to sending e-mails more often, both to my internship supervisor and to my clients. This not only saves time, but also allows me to get on with other work while waiting for a response from my internship supervisor.

Besides improving my communication, I have also started taking more **notes** during conversations or when having good ideas. This way, I don't forget anything important and can read everything back later. This helps me to think first and select ideas before I start so that I know clearly what I want to include in the game.



Another important point is **keeping appointments**. Although I still encounter challenges, I always try to honour the agreements I make with my internship supervisor. Most have succeeded, but I believe I can further develop this skill to do so even more consistently and accurately.

# REFLECTION REPORT

*Bon has described well in this report all that he has learnt during his internship. He has grown enormously both personally and technically. Bon shows that he learned to document, communicate better and think in a problem-solving way. During his project, he was the project leader, despite finding this very difficult at first, it worked out well. We look back with pride at how Bon has grown during his internship with us.*

*Internship supervisor cohort 2024 - 2025*



Although there is still a lot to **learn** and **do**, I am convinced that with the basic knowledge I have gained in six months, I will be able, if I keep this up, to realise **promising projects** in the future.

My name is Bon Cao, you have just read '**Intern Report**'.

23 January 2025



## Intern Report

Credit works of art: from Rouse Cards

Artworks are not Defence related

