

Nýr: The Last Stand
Book of specifications



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1 Introduction

As part of the S2 IT project, students of the FENRIR Group have to develop a game from scratch, using knowledge acquired during classes. The project quoted previously is named "Nýr: The Last Stand", a viking RPG-game created using Unity engine and coded in Csharp.

This book of specifications provides information about what Nýr: The Last Stand will be, how will it be made, and how did the FENRIR Group decided to organize themselves.

Every part of this book is detailed explicitly, from the work breakdown, the schedule, to the technicalities.

Note that everything shown in this document is made by the FENRIR Group, including logos.

2 Origins

Although Nýr: The Last Stand is an original game imagined and developed by the FENRIR Group, we, of course, have been inspired by other games and work of arts. In order to understand how Nýr came to our minds, here is a non-exhaustive list of our influences and inspirations.

2.1 Influences

The Vikings setting and their mythology is a common theme in nowadays popular culture. We've seen them through many media, from series with Vikings (2013), to video games such as God Of War (2018) by Santa Monica Studios, Northgard (2017) by Shiro Games, and even more recently Assassin's Creed: Valhalla (2020) by Ubisoft Montréal. At FENRIR Group, we all love the vikings era and everything that comes with it. Setting up a game with RPG mechanics is the perfect opportunity to explore this deep and vast universe.

2.2 Inspirations

When we first had the idea of Nýr: The Last Stand, we first thought about the setting, how the universe will be, and what we could do with it. For the graphics, we wanted to go for a sober and simple environment. Low-poly was the best fit for us. We were mainly inspired by Project Winter's (2019) graphics.



Figure 1: Screenshot from Project Winter (2019)

For the gameplay, we took different sources of inspirations. The idea of having to explore an area, fighting wave of enemies, in a 4-player cooperation, came from the recent Minecraft Dungeons (2020) from Mojang Studios, which bring back the long-forgotten dungeon crawler genre in video games in a fun and epic experience. Moreover, the idea of completing an island to hundred percent with a crew, finding loots through chests, discovering abandoned structures, vikings camp, and more, came undoubtedly from Assassin's Creed: Valhalla (2020).



Figure 2: Screenshot from Minecraft Dungeons (2020)



Figure 3: Screenshot from Assassin's Creed: Valhalla (2020)

We chose to implement RPG (roleplay game) mechanics because that is what best fit the game, and that's a genre we all played. Players will have to loot, upgrade their stuff, get better and better in order to scale with the enemies which will become more and more difficult throughout the levels, and even more for the boss fights that players will encounter at the end of each island.

3 Development

3.1 Target system

Nýr: The Last Stand is intended to be played on the recent versions of Windows.

3.2 Software

Nýr: The Last Stand will be developed using Unity 2019.4.17 engine, and Visual Studio. Graphics assets for the User Interface will be made using Adobe Photoshop CC 2020 and Illustrator CC. The website will be realised with Jekyll (version 4.2.0), a static site generator. It will be hosted on Github.

3.3 Concept

The aim of Nýr: The Last Stand is to produce a multiplayer, fun, and epic, up to 4 players experience. Players will embody vikings from a forgotten age and will have to fight enemies, and creatures on multiple islands

Players will disembark on a newly discovered island at every beginning of a game. They will have to find every mysteries, treasures, and wealth in order to end the game. Enemies will be there to try to stop players in their adventure.

Players will eventually get to upgrade their stuff to defeat higher-level enemies, for instance to deal more damage to them. Better stuff will be unlocked

by increasing level during their play-through.

3.4 Story

3.4.1 Setting

The game will be set in the Golden Age of Vikings, at the end of the ninth century, in Old Scandinavia.

3.4.2 Scenario

As the Ragnarsson wreak havoc in England, the fangs of the cold still bite unlucky clans of Norway. Vargfell is one of them. Within two winters, supplies will be exhausted and the population condemned to join the foggy Nifelheim realm. In his last stand, the Jarl chose his best drengir to go and explore the islands to the West. Play as one of the Jarl's warriors and discover new lands aboard your ship. With three of your friends, plunder and fight islands to save Vargfell before it's too late.

3.5 Cost

Developing Nýr: The Last Stand was not supposed to raise additional costs. Though, the group decided to buy assets to avoid wasting time modelling 3D assets, which require a lot of time and learning. Here is a board summing up the group's expenses.

Assets pack name	Price (in euros)
POLYGON - Adventure Pack	17.87
POLYGON - Vikings Pack	26.79
Total cost	44.66

4 Nýr: The Last Stand - Work Breakdown

4.1 Saves

The game will work with levels, therefore the player must be able to save his game to continue later without having to go through the levels he has already passed. There is a lot of data to save, like the health bar, the inventory, the equipment etc. The player must be able to find his game exactly as he left it. The save of the player's progression will be done with the JSON file format by Anita who will be supervised by Liam. The format that will be used works well with Unity and allows us to use C since it is a language-independent data format.

4.2 Character

The character is one of the task that needs to be completed early. "Character" designate everything about the player: how will he walk, jump, run, roll, dodge; how will he attack with a sword or with an axe, how will he defend with a shield, etc. "Character" also aims to create the very essence of the player. We will have to set up a health bar, a stamina bar to add a difficulty to the game, and a default speed for instance. All of these statistics will have to be smartly calculated in order to avoid the game being too hard or too easy. The character part is the root of many of the others tasks we have to do in the game, that is why we need to complete it fast and well to set up the ground for the others to work. Maxime will be in charge of this part, supervised by Anita.

4.3 Items

The progression system is based on the loot dropped by enemies. There will be the possibility to find pieces of armor, weapons or consumables. The more you play the game, the more the drop is interesting. Items will give the player advantages, sometimes bonuses, and even new abilities. Players will be given a wide range of weapon to chose from: axes, swords, shields, and more. They can be equipped, stored in the inventory, transformed, upgraded or sold to merchants. Liam will be responsible of this part and will team up with Mathieu.

4.4 UI

For the game to be playable, we need to design elements that will appear on-screen such as the Player's life, the inventory, or even more important the menus so we can navigate through the possibilities that Nýr: The Last Stand will offer to the players. Using Photoshop and Illustrator, the goal is to make viking-themed elements for the UI (User Interface) in order to have a coherent and beautiful, Nordic-looking user interface with the classic RPG elements on it. Maxime will be in charge of this part, supervised by Mathieu.

4.5 AI

AI is a major element of a project, it will add the challenge. By "AI" we mean all the non-playable characters which will be in our game. Some will be peaceful and will guide the player through the game. Some others will be the enemies and will try to stop the player. We can distinguish them in two categories, the "bosses" which will be the last step to conclude each levels, and the more classic enemies. Those will be distributed in the levels the player will go through. The enemies will be harder to beat as the player will move forward in the game to give an interesting experience to the player. However, the difficulty must be balanced so the game doesn't become boring. Mathieu will be in charge of this part, supervised by Liam.

4.6 The world of Nýr

The map is a crucial part of the game. A vast map with diversity will be more interesting to play in for the player. In Nýr the player will have to go from island to island in order to complete the game. Therefore the map will contain the homeland of the player and a certain number of islands corresponding to the number of levels. The game's aesthetic is in low-poly which implies sober and simple decorations and all that on a viking's theme. For the creation of the map we will be using assets we bought to develop this game. It will allow us to avoid taking too much time on the modelling and risking handing over a game that we are not satisfied with because of the lack of time. Anita will be responsible for this part, supervised by Maxime.

4.7 Multiplayer

The Multiplayer we propose is necessary to make the game much more entertaining. Since the game is mainly about exploring islands, achieving quests, etc... We firmly believe that this experience will offer more fun and lifetime to Nýr: The Last Stand. With this addition, you can discover the land with a party of up to 4 players. To do so, you and your friends may join a lobby and start the adventure all together with everything syncing at the same time. The host will be able to save the progression and keep on going without having to wait for the 3 same friends. To do so, we are going to implement Mirror Networking to our Unity project, it's a highly capable API designed for multiplayer on Unity. This section is orchestrated by Liam and supervised by Maxime.

4.8 Website

The main goal of the website is to make you want to play the game. To do so, it is necessary to promote the game based on screenshots, explanations of the game's history and mechanics. The website will give a feedback on the developpement experience with a timeline achievement and a catalog listing the difficulties we met and the solutions we found. The website will have a link

to download the game, the report, and a "lite" version of the game. This link will be at the end of the website. Before this will be featured some links to the multiple ressources used to build the game. The members of the developpement team will be credited after these links. Mathieu will be in charge of this part, supervised by Anita.

5 Conclusion

5.1 Work breakdown

Here is a table resuming how the tasks will be broken down.

Tasks	Maxime	Liam	Anita	Mathieu
Saves		a	R	
Player	R		a	
Items		R		a
UI	R			a
World / Map	a		R	
AI		a		R
Multiplayer	a	R		
Website			a	R

R: The tasks which the person are responsible for.

a: The tasks which the person are going to assist.

5.2 Planning

For our official starting date, we will use the validation date of this document.
And for the end, the final date in June. We are going to use the defenses ("Soutenances") as milestones to have good time markers.

Tasks	1st "Soutenance"	2nd "Soutenance"	3rd "Soutenance"
Saves	20%	50%	100%
Character	75%	100%	100%
Items	30%	75%	100%
UI	30%	80%	100%
World / Map	35%	85%	100%
AI	40%	70%	100%
Multiplayer	40%	80%	100%
Website	30%	80%	100%

5.3 To sum up

Developing Nýr: The Last Stand is a really exciting experience for us, in FENRIR. We all have done programming before but nothing that can compete with the needs of this ambitious project. We, of course, will have to work harder and harder to finish in time, and to achieve our goal: making a fun game which will mirror what we all love about playing video games, in addition to the programming knowledge we will gain during the next months.

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