Game Design Document

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Date: 28.05.2021
Name of the Game: War of the Gods
Name of the Student: Jeffrey Pillmann
Tutorial:
Link to the game repository:
https://github.com/jpillmann/pillmann-jeffrey-game-development-project

Table of content

1 Overview
The game will be a 3rd person single player RPG for PC. The backdrop for the game are vikings and norse mythology with religion being a core gameplay mechanic determining character stats and weapon choices. The gods are at war and it is the player's task to join a side and win the war by slaying the other god and ascending into godhood themselves. With religion being a core mechanic the player will need to worship the god they decide to follow by completing quests for them and upholding their tenants. Combat revolves around 3rd person hack and slash gameplay with blocking and dodging mechanics.

1.1 Game abstract
3rd person PC action RPG centered around norse mythology, with religion as a core gameplay concept.

1.2 Objectives to be achieved by the game
Learning the concepts of game development in a practical manner.

1.3 Core gameplay
At the core of gameplay is combat. The player will mainly be focussed on completing quests for the war effort. The bulk of which will consist of fighting enemies. In order to make it fun for the player, combat will be challenging, needing the player to avoid damage in order to survive encounters.

1.4 Game features
Combat:
The combat of the game is rather simple. Being inspired by the combat of games such as From Software. 2015. Bloodborne. Game [PS4]. (25 March 2015). Sony Computer Entertainment, San Mateo, USA. Last played 2020. The player will hack and slash their way through enemies, while relying on block and dodge mechanics to avoid taking damage. The Player can choose from an assortment of different weapons like melee weapons such as swords, axes, maces and different shields, which can not only be used to block damage, but also to dish it out.

Stats:
The player has three main stats that are important to him. First there comes health, which he needs to survive and stamina, which he needs to sprint and attacks. The next important stat is his damage. The damage the player deals is determined by the weapon he wields. Additionally the player can receive bonuses to his damage by his chosen deity. Additionally the player's weapon has a blocking stat which reduces the damage he takes from hits if the player uses the weapon in his left hand to block incoming attacks. Lastly the player has damage multipliers that can be affected by the god they worship allowing them to deal more damage with certain weapons.

Inventory System:
The game will have an inventory system. In the player's inventory he can store weapons. There will be no limit to the players carrying capacity.

Quests:

The player can receive quests from NPC in his chosen deities' settlement. The main quests the player needs to complete in order to win the war and finish the game are given by the shaman of the settlement. Each god has their own territory in the world. The main objective is to win the war and therefore to kill the enemy gods. For the player to fight the gods they need to be angered enough to come forth. Main quests will achieve just that. They include tasks like attacking the settlements and desecrating the altar of their god, and lastly slaying their god. In a way each enemy territory has their own smaller questline, but they all work the same way. Side Quests given by other npc include killing random enemies and delivering/ finding items for them.

NPC's:
There are a number of npcs in the game the player can interact with. Most important being the gods. The player can interact with the god they worship through prayer, which will gain him favor. Praying at a gods altar will allow the player to begin worship of said god. Enemy gods cannot be interacted with, besides fighting them in combat after their settlement and altars have been destroyed. There are 6 gods in total in the game (2 in the prototype), which create a two-sided. The two sides are respectively Odin (mage), Thor (warrior) and Loki (rogue). And the opposing side consists of Freya (mage), Tyr (warrior) and Hel (rogue). The next group of npcs are settlers/ townspeople. Townspeople of settlements/territories that are allied to the player's god are friendly as long as the player doesn't behave unlawfully and can give the player sidequests. Townspeople in settlements of enemy gods are hostile towards the player and will attack on sight.

Religion (Tenants, Favor):
The Religion the player chooses affects his efficiency with certain weapons and therefore, in a traditional sense determines his class. Each god gives the player a bonus to one of his damage multiplier stats. For example allowing him to deal more damage with axes, or maces, or dealing more magic damage with enchanted weapons. Each God has tiers of worship (Novice, Priest, Champion). Novice is the base level giving them a boost in one of the damage multipliers. Priest is the next step making that multiplier significantly more powerful. At the last stage of champion the player receives a weapon reward from their god. To ascend the tiers of worship the player needs to gain Favor. Favor can be gained by slaying enemies and completing quests. Favor can be lost by killing friendly npcs. The player's status and favor is always updated when they pray.

1.4.1 Genre
The game is an RPG (role playing game). The player will create their own character to play with in the world. In the prototype this is not the case, the player starts as a male warrior in the settlement of Thor, God of Thunder.

1.4.2 Number of players
Singleplayer.

1.4.3 Game theme
Norse Mythology, Medieval, Fantasy.

1.4.4 Story summary
The norse gods are at war and there are two sides. Odin, Thor and Loki against Freya, Tyr and Hel. It is up to the player to decide which side will win. At the beginning of the game the player will choose a deity to worship. The goal is to help the chosen side win the war by slaying the enemy gods in order to ascend into godhood as reward. To slay the gods the player has to attack their settlements and defile their shrines and temples making them mad and therefore luring them into a fight in which they then can be defeated.

2 Mechanics

2.1 Game elements categories
Enemies:
Hostile NPCs. Fight with all sorts of weapons. Cannot be interacted with.

Boss:
Norse Gods of the enemy faction. Fight like normal enemies. Have more health and deal more damage.

Weapons:
Swords, Axes, Maces, Enchanted Weapons (Swords, Axes, Maces, that deal magic or blood damage).

2.2 Rules
Kill enemies, complete quests -> Player gains Favor
Kill friendly npcs -> Player loses Favor / gets abandoned by their god

2.2.1 Interaction rules
The player is able to interact with the world in different ways. Enemies can be engaged in combat. Certain friendly npcs can be talked to and have quests the player can choose to accept. Items (weapons) in the world can be picked up and used by the player.

2.2.2 Artificial Intelligence
Enemies are hostile towards the player. If the player enters their visible range they will begin to chase the player to engage in combat with them.

2.3 Game world elements
There are no game world elements outside of the core gameplay in the prototype of War of the Gods.

2.4 Game log elements
Two elements in the game track a player's progress. The Favor level of the player showing how well they worship their god. And a quest log showing what quests the player has completed up to this point.

2.5 Other elements

2.6 Assets list

Weapons of each type (Sword, Axe, Mace) and their magic variants (magic, blood). These will be procedurally generated and can be found throughout the world.
Enemies and friendly npcs.

3 Dynamics

3.1 Game World

Light forests, settlements, hills all surrounded by mountains.

3.1.1 Game theme details

Light Forests, hills and mountains. Wooden houses and sheds. Wooden temples and stone/obsidian altars for worship of the gods. The game world should feel open and scarcely populated by small settlements.

3.1.2 Missions/levels/chapters Flow

Since the game is an open world game, navigation is not of a linear nature. The player is free to go wherever he wants. However in certain areas, depending on the player allegiance npcs will be hostile. Missions/Quests are of a linear nature however. The player needs to complete one quest after another to advance the main questline.

3.2 Missions/levels/chapters elements

Fortify your Position:
Defeat bandits in the area controlled by your god, or allied gods.

Defile Shrines (0/2):
The player needs to defile two shrines of an enemy god in that particular gods territory.

Attack Settlement:
The player attacks an enemy settlement. Defeat the enemy forces and claim the settlement for your god's side.

Defile Temple:
The player has to defile the temple within the acquired settlement.

Defeat God:
The player has to defeat the enemy god in combat.

3.2.1 Objectives

3.2.2 Rewards
The Player gains favor from defeated enemies and completed quests. Upon ascending the ranks of worship of their chosen deity the player can also receive a weapon item as reward. Certain quests also yield weapon items as quest rewards.

3.2.3 Challenges
The game poses three main challenges. Raising your favor, defeating enemies in combat. Defeating enemy gods in Boss fights.

3.3 Special areas
There are no special areas in the prototype.

3.4 Game interface
HUD:
Features a Health- and Stamina Bar and Character Quickslots. Top (magic), bottom (Items), left (left hand equipment), right (right hand equipment). The Player can go through the left and right hand Quickslots using the arrow keys on the keyboard.

Select Window:
The Player can open the "Select window via the Esc key on the keyboard. In the "Select Window" the player can choose what UI window to open: Quest, Inventory, Equipping, Settings.

Quest-Window:
The Quest Window shows a list of active and completed quests.

Inventory Window:
The Inventory Window at this point shows the Weapon Items the player has in his inventory.

Equipping Window:
In the Equipping window the player sees the items he has equipped in his quickslots. To equip an item into one of the slots the player clicks on the slot. The player is then directed to the Inventory where he selects the item he wants to equip in the selected slot, by clicking on it.
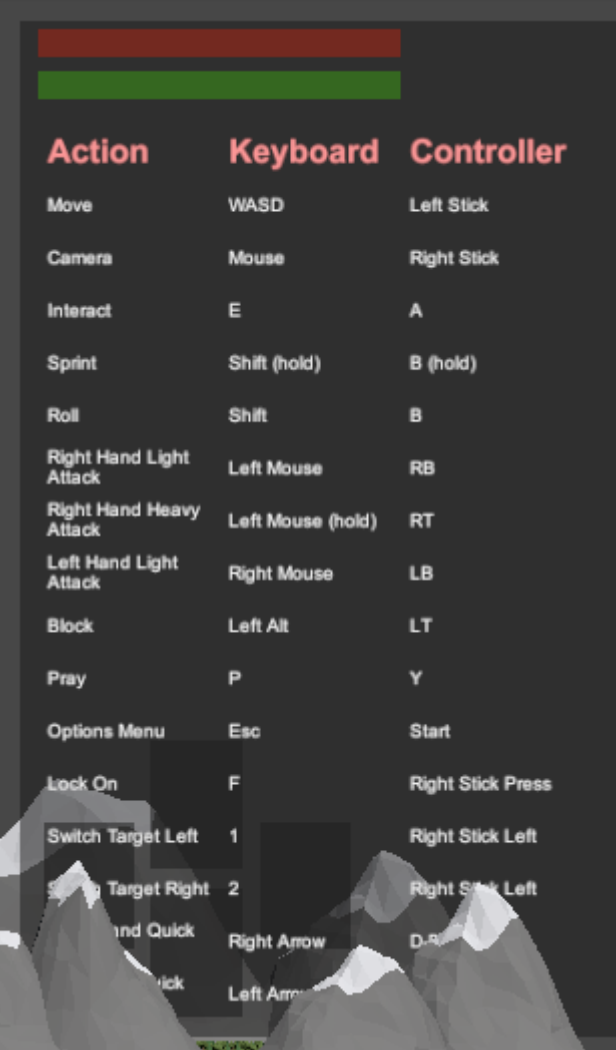
Dialogue Window:
The Dialogue Window contains the name of the NPC the player interacts with and their dialogue.

Game Settings Window:
Shows the controls of the game for keyboard and mouse as well as controller.

3.5 Controls interface

| Action	Keyboard	Controller
Move	WASD	Left Stick
Camera	Mouse	Right Stick
Interact	E	A
Sprint	Shift (hold)	B (hold)
Roll	Shift	B
Right Hand Light Attack	Left Mouse	RB
Right Hand Heavy Attack	Left Mouse (hold)	RT
Left Hand Light Attack	Right Mouse	LB
Block	Left Alt	LT
Pray	P	Y
Options Menu	Esc	Start
Lock On	F	Right Stick Press
Switch Target Left	1	Right Stick Left
Switch Target Right	2	Right Stick Left
Hand Quick	Right Arrow	D-Pad
Quick	Left Arrow	

3.6 Game Balance

Player and npc stats can be easily changed. Making them deal more or less damage for example, or increasing or decreasing their health or regenerative powers.

4 Visuals and Sounds
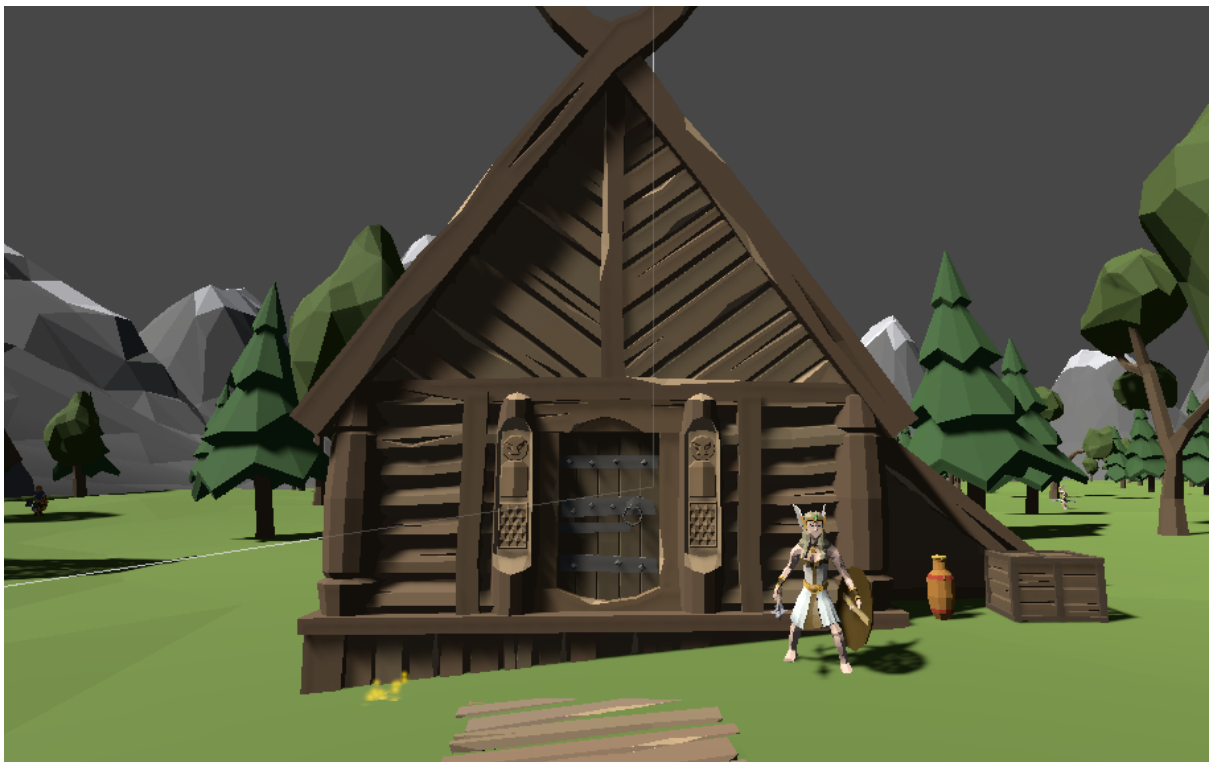
4.1 Game visuals

Low Poly graphics.
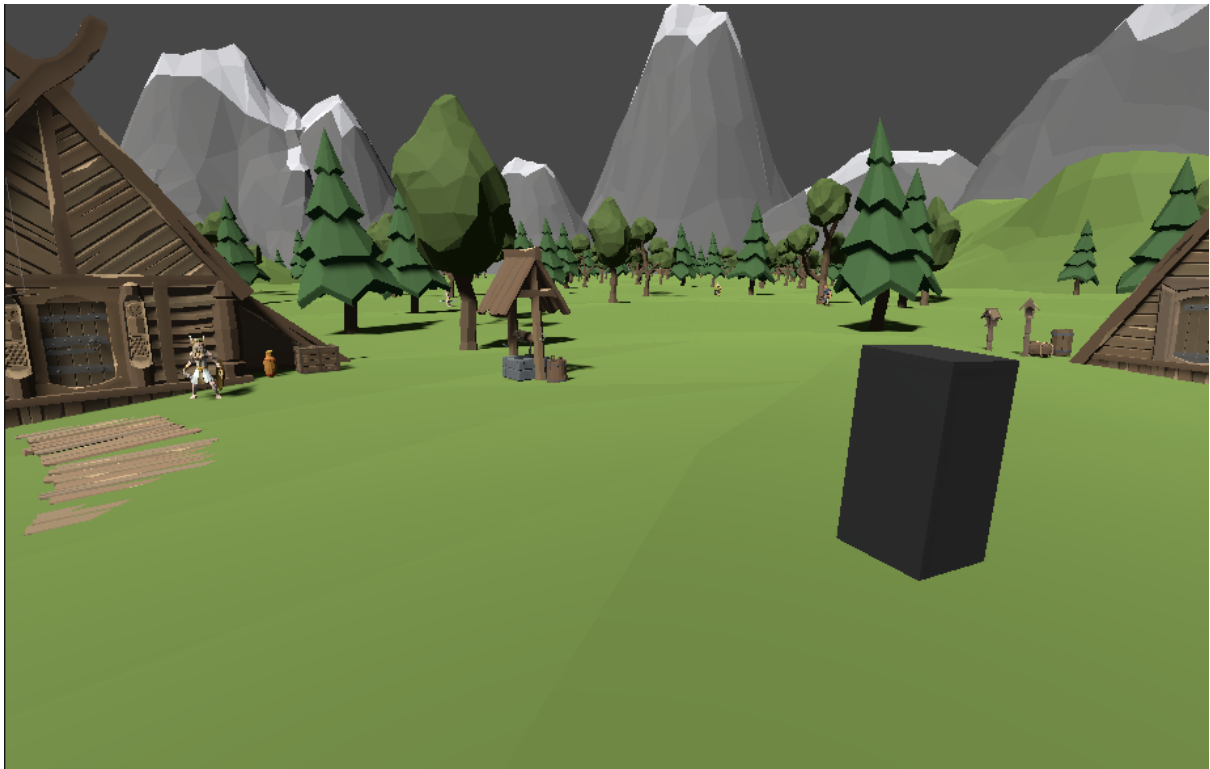
View of Settlement of Thor, God of Thunder. Black Stone in front: Altar of Thor.

Player character performing a heavy attack.

Enemy warrior armed with an axe.

Temple building of settlement. Npcs in front of this building are the shamans of their village and are responsible for giving the players their main quests. Yellow sparkles on the left represent a weapon item that can be picked up by the player.

4.2 Game sounds
There are no sounds in the Prototype.

5 Document information
5.1 Definition, acronyms and abbreviations.

Term or abbreviation	Definition and acronyms

5.2 Document references.

Movement + Movement Animations + Character Animations:
Sebastian Graves. (15.03.2020). *Create DARK SOULS in Unity ▷ EP. 1 Movement* [Video file]. Youtube. https://youtu.be/LOC5GJ5rFFw

Camera Movement (Follow Player):
Sebastian Graves. (22.03.2020). *Create DARK SOULS in Unity ▷ EP. 2 Camera Handler* [Video file]. Youtube. https://youtu.be/c1FYp1oOFIs

Camera Collision + Smooth Camera Movement:
Sebastian Graves. (31.03.2020). *Create DARK SOULS in Unity ▷ EP. 3 Camera Collisions* [Video file]. Youtube. https://youtu.be/Don3lGSAF2A

Rolling Mechanic:
Sebastian Graves. (11.04.2020). *Create DARK SOULS in Unity ▷ EP. 4 ROLLING* [Video file]. Youtube. https://youtu.be/RVWh-YAQEIQ

Sprinting:
Sebastian Graves. (22.04.2020). *Create DARK SOULS in Unity ▷ EP.5 SPRINT* [Video file]. Youtube. https://youtu.be/gyqfmE_1aus

Falling, Gravity:
Sebastian Graves. (11.05.2020). *Create DARK SOULS in Unity ▷ EP. 7 Player FALLING & Fall Detection* [Video file]. Youtube. https://youtu.be/dJdmUgqgZjU

Inventory System, Weapon Items:
Sebastian Graves. (21.05.2020). *Create DARK SOULS in Unity ▷ EP. 8 WEAPON ITEMS* [Video file]. Youtube. https://youtu.be/7IbW2dxxrf4

Attack Animations:
Sebastian Graves. (01.06.2020). *Create DARK SOULS in Unity ▷ EP. 9 LIGHT & HEAVY ATTACKS* [Video file]. Youtube. https://youtu.be/cOGep0Vlayk

Player Stats, Health, UI, Receiving Damage:
Sebastian Graves. (21.05.2020). *Create DARK SOULS in Unity ▷ EP. 10 Player Health & Damage* [Video file]. Youtube. https://youtu.be/iJSfBwC121c

Weapon Damage:
Sebastian Graves. (25.06.2020). *Create DARK SOULS in Unity ▷ EP. 11 DEALING DAMAGE* [Video file]. Youtube. https://youtu.be/kU478xrj-R0

Weapon Combos:
Sebastian Graves. (07.07.2020). *Create DARK SOULS in Unity ▷ EP. 12 WEAPON COMBOS* [Video file]. Youtube. https://youtu.be/R6vtF4mpiOw

Weapon Quick Slots:
Sebastian Graves. (27.07.2020). *Create DARK SOULS in Unity ▷ EP. 14 Weapon Quick Slots* [Video file]. Youtube. https://youtu.be/qC9TPzXdxyk

Weapon Slots UI Screen, Weapon Slot Manager functionalities, Weapon Icons:
Sebastian Graves. (04.08.2020). *Create DARK SOULS in Unity ▷ EP. 15 Weapon Slots UI* [Video file]. Youtube. https://youtu.be/Xo8gKcu3yxw

Stamina Drain on Rolling and Sprinting:
Sebastian Graves. (10.08.2020). *Create DARK SOULS in Unity ▷ EP. 16 Weapon Stamina Drain* [Video file]. Youtube. https://youtu.be/K3--1PCTf_g

Item Pick Up, Interactable class:
Sebastian Graves. (20.08.2020). *Create DARK SOULS in Unity ▷ EP. 17 Pick Up Item* [Video file]. Youtube. https://youtu.be/Rva7zfW9NFw

UI Pop Ups, for Pick Up Item, Dialogue, Quests etc:
Sebastian Graves. (27.08.2020). *Create DARK SOULS in Unity ▷ EP. 18 UI Pop Ups* [Video file]. Youtube. https://youtu.be/SaSbwLs8WOo

Inventory UI, used same Idea for Quest Lists UI:
Sebastian Graves. (15.09.2020). *Create DARK SOULS in Unity ▷ EP. 20 Inventory UI* [Video file]. Youtube. https://youtu.be/0ZI1Si23XbE

Weapon Inventory Slots UI:
Sebastian Graves. (21.09.2020). *Create DARK SOULS in Unity ▷ EP.21 Inventory Slots UI* [Video file]. Youtube. https://youtu.be/l7yYL00dzIo

Equipment Screen UI:
Sebastian Graves. (22.09.2020). *Create DARK SOULS in Unity ▷ EP. 22 Equipment Screen UI* [Video file]. Youtube. https://youtu.be/jFRI3hwQhOE

Bug fixes: camera jitter, input memory usage:
Sebastian Graves. (30.09.2020). *Create DARK SOULS in Unity ▷ EP. 23 Camera JITTER & Bug Fixes* [Video file]. Youtube. https://youtu.be/iQ6IvTsSmY8

Camera Lock On:
Sebastian Graves. (03.10.2020). *Create DARK SOULS in Unity ▷ EP. 24 LOCK ON* [Video file]. Youtube. https://youtu.be/r5SdldM0pKQ

Sebastian Graves. (10.10.2020). *Create DARK SOULS in Unity ▷ EP. 25 LOCK ON (PT. 2)* [Video file]. Youtube. https://youtu.be/XOmXBO7a1RA

Sebastian Graves. (18.10.2020). *Create DARK SOULS in Unity ▷ EP. 26 LOCK ON (PT. 3)* [Video file]. Youtube. https://youtu.be/5SnhbiKsqoY

Equip Weapons from Inventory:
Sebastian Graves. (26.10.2020). *Create DARK SOULS in Unity ▷ EP. 27 Switch Weapons from Inventory* [Video file]. Youtube. https://youtu.be/R_0hcqRaLMk

A.I State Machine:
Sebastian Graves. (17.11.2020). *Create DARK SOULS in Unity ▷ EP. 30 ENEMY A.I - FOV Detection* [Video file]. Youtube. https://youtu.be/DPtfgQvUIEQ

Sebastian Graves. (24.11.2020). *Create DARK SOULS in Unity ▷ EP. 31 ENEMY A.I - Movement & Pathfinding* [Video file]. Youtube. https://youtu.be/rGIxCB3MKtI

Sebastian Graves. (02.12.2020). *Create DARK SOULS in Unity ▷ EP. 32 ENEMY A.I - ATTACKS* [Video file]. Youtube. https://youtu.be/XdSNG6FWq8A

Sebastian Graves. (08.12.2020). *Create DARK SOULS in Unity ▷ EP. 33 A.I STATE MACHINE* [Video file]. Youtube. https://youtu.be/X7TPjtsdqhg

Sebastian Graves. (16.12.2020). *Create DARK SOULS in Unity ▷ EP. 34 A.I STATE MACHINE (PT. 2)* [Video file]. Youtube. https://youtu.be/g43lohNVF9M

Sebastian Graves. (30.12.2020). *Create DARK SOULS in Unity ▷ EP. 36 A.I Bug Fixes* [Video file]. Youtube. https://youtu.be/wITcjmVdF8g

Stamina Regeneration:
Sebastian Graves. (09.01.2021). *Create DARK SOULS in Unity ▷ EP. 38 Rolling Invulnerability & Stamina Regeneration* [Video file]. Youtube. https://youtu.be/vHxcJihYXhc

Stamina Dependant Actions:
Sebastian Graves. (16.02.2021). *Create DARK SOULS in Unity ▷ EP. 45 Stamina Dependant Actions* [Video file]. Youtube. https://youtu.be/nLhCa_17fHQ

Blocking:
Sebastian Graves. (25.03.2021). *Create DARK SOULS in Unity ▷ EP. 51 BLOCKING (Pt. 1)* [Video file]. Youtube. https://youtu.be/OSQjFVliVD4

Quest + Quest Goal Class:
Brackeys. (10.02.2019). *QUESTING SYSTEM in Unity!* [Video file]. Youtube.
https://youtu.be/e7VEe_qW4oE

Pick Up Items - Particle System Animation:
Brackeys. (18.02.2018). *Everything to know about PARTICLE SYSTEM* [Video file]. Youtube.
https://youtu.be/FEA1wTMJAR0

UI Animations (Tweening):
Coco Code. (25.02.2021). *Master UI ANIMATIONS! - Unity UI Tutorial* [Video file]. Youtube.
https://youtu.be/YqMpVCPX2ls

6 Attachments

Character Asset:
https://assetstore.unity.com/packages/3d/characters/humanoids/lowpoly-norse-gods-184490

World Assets (Trees, Buildings, Clutter):
https://assetstore.unity.com/packages/3d/environments/landscapes/rpg-poly-pack-lite-148410

Animations:
https://assetstore.unity.com/packages/3d/animations/melee-warrior-animations-151650

UI Tweening:
https://assetstore.unity.com/packages/tools/animation/leantween-3595

Weapons:
https://assetstore.unity.com/packages/3d/props/weapons/free-low-poly-rpg-weapons-demo-170217

7 Study

7.1 Study Setup

The Participants of the study were supposed to test the prototype of the game and play through the first quest of the game. The Research goal of this study was to find out if the combat was fun and challenging for the player. After playing the game the participants were to fill out a questionnaire for the evaluation. The questionnaire can be broken in two parts. The first half is made after the standardized questionnaire IMI, where some questions have been slightly altered to fit the game better. The second half of the questionnaire focuses on answering the Research goal with 6 questions about the combat system.

7.2 Measurements

The first half of the questionnaire, which is based on the IMI questionnaire, was completely measured in a five-point likert scale. (0) on this scale stands for disagreement with the statement of the questionnaire, while (5) stands for agreement. Three of the six questions regarding the combat were also measured in said likert scale. The three other questions were choice-questions with 2 choices each. Lastly the questionnaire concluded with three fields for qualitative feedback in text form.

7.3 Results

I enjoyed playing this prototype.

15 Antworten
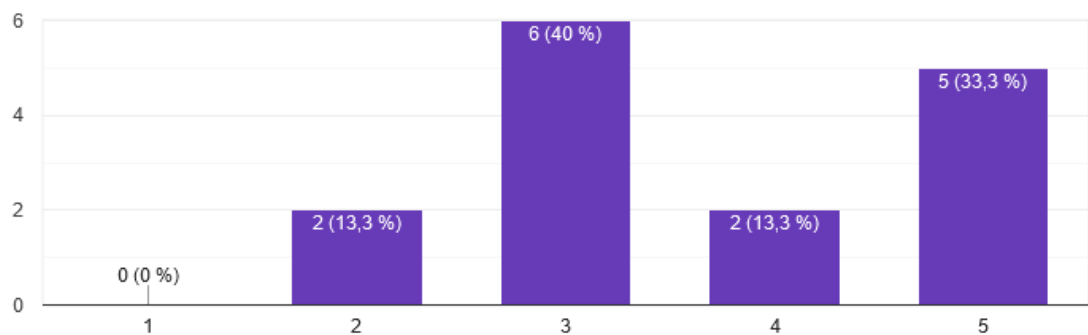
M: 3.67, **SD:** 1.07

I think I am competent at this prototype.

15 Antworten
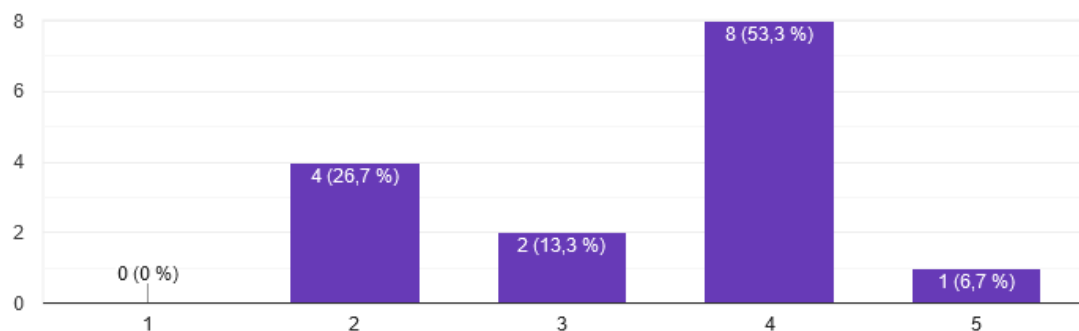
M: 3.4, **SD:** 0.95

Learning the controls of the game was easy.

15 Antworten
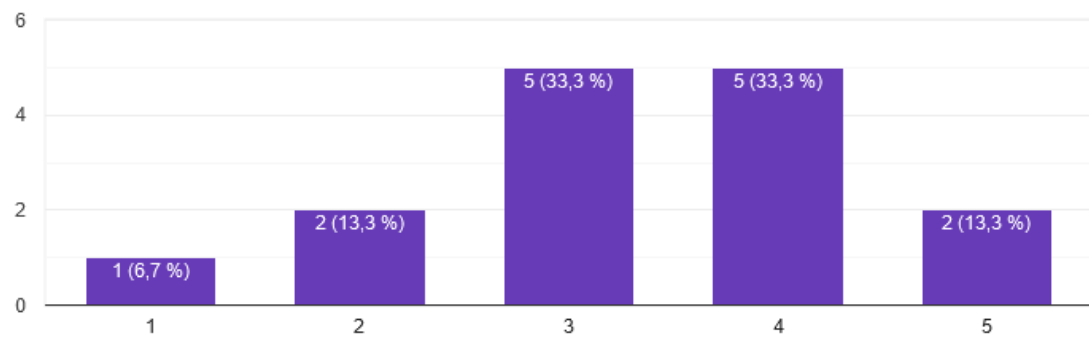
M: 3.33, **SD:** 1.07

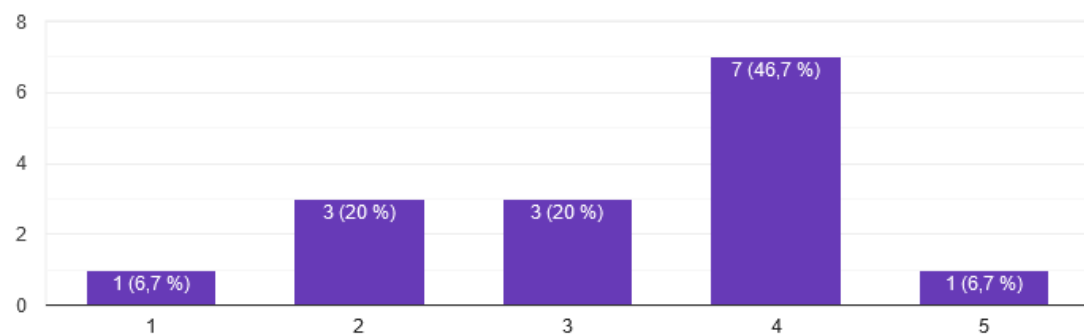## Playing the game was an intense experience.

15 Antworten
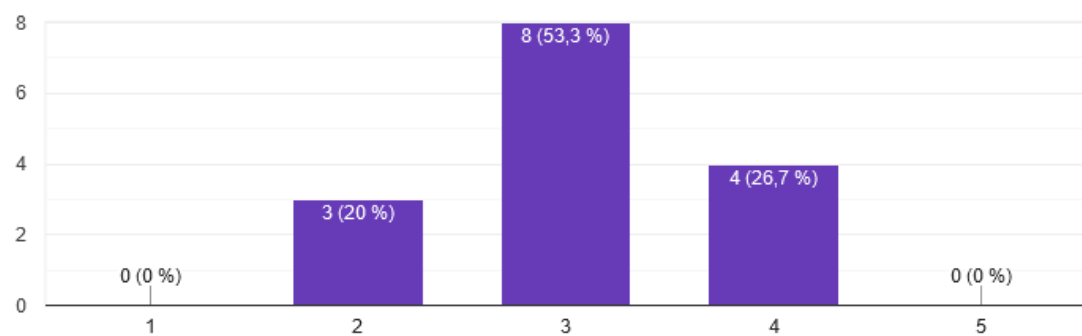
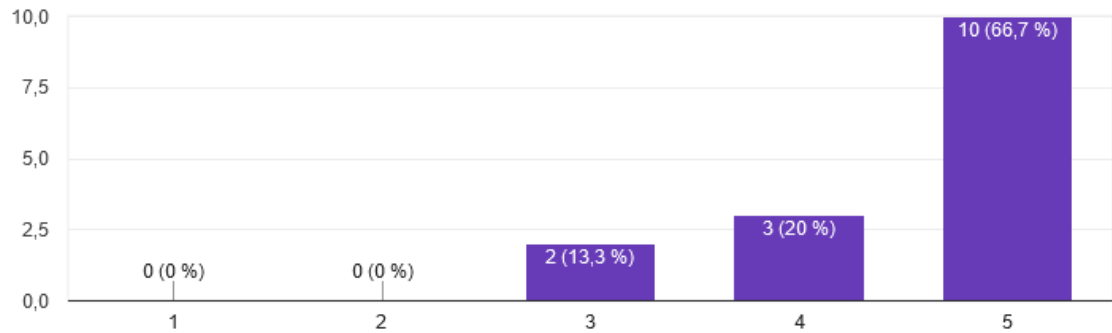**M:** 3.07, **SD:** 0.68

I felt immersed in the game world.

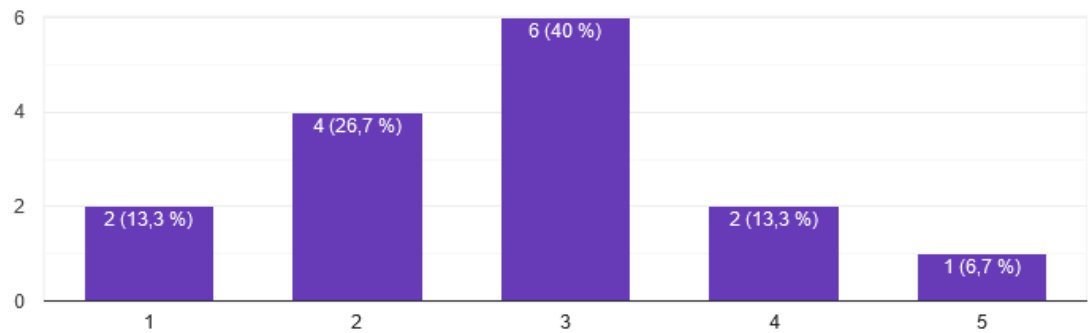15 Antworten

M: 3.27, **SD:** 1.06

I enjoyed the visuals of the game.

15 Antworten

M: 4.53, **SD:** 0.72

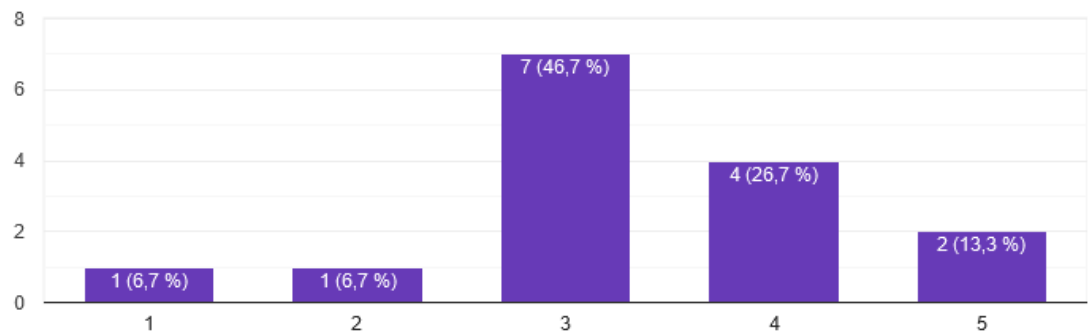## The combat was difficult.

15 Antworten

M: 2.73, **SD:** 1.06

The combat was fun.
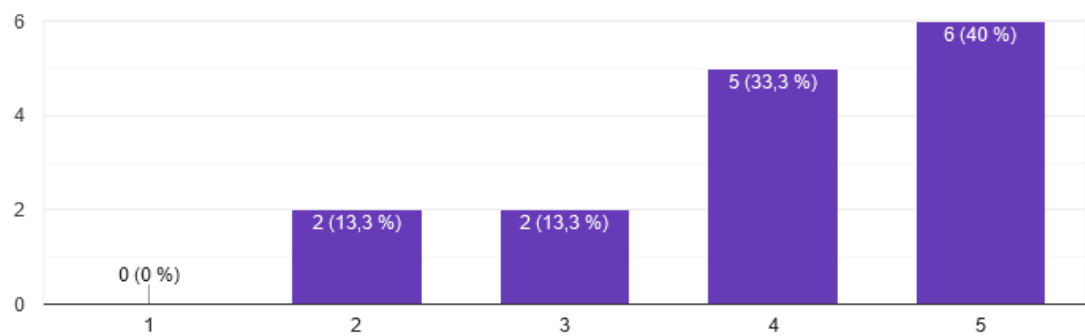
15 Antworten

M: 3.33, **SD:** 1.01

The combat controls were intuitive.

15 Antworten

M: 4.00, **SD:** 1.03

What did you use to play the game?
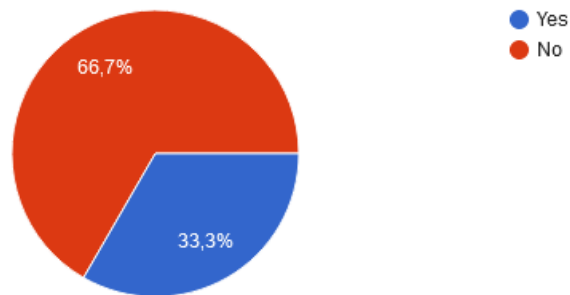
15 Antworten

- Keyboard & Mouse
- Controller

All Players used a Keyboard and Mouse to play the game.
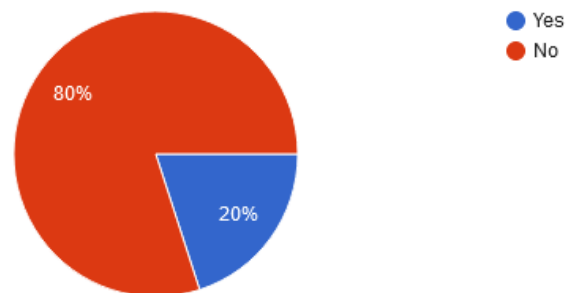
Did you die in the game?

15 Antworten

10 players did not die in the game, while 5 did.

Did you finish the Quest?

15 Antworten

12 players did not finish the quest while 3 did.

Qualitative Responses:

The participants of the study gave qualitative feedback to three questions:

1) **What did you like about the game?**
   Participants in general enjoyed the atmosphere and the visual style of the game. Participants also enjoyed the combat mechanics, and animations.

2) **What did you not like about the game?**
   Participants in general noticed some bugs like the item pickup not working properly and the camera movement being slow. Furthermore some did not feel like the game gave detailed enough instructions, or help on what to do.

3) **What improvements would you like to see for the game?**
   Participants wish for a guide on how to play the game and what it's about. Explanations for some of the mechanics like "praying" and bug fixes (picking up items, camera).

7.4 Findings

In this section I want to discuss the findings of the survey in regards to the Research Goal. The question was if the game's combat is fun and challenging. Participants were undecided in both direct questions. *The combat was difficult* (**M:** 2.73, **SD:** 1.06), *The combat was fun* (**M:** 3.33, **SD:** 1.01). Perhaps one reason why these values land in the middle is because they are not completely related. Not everybody who plays games wants the game to be challenging, or perceive a greater challenge as greater fun. It is safe to say however that the combat fun was not impeded by the combat controls as players found them intuitive. *The combat controls were intuitive* (**M:** 4.00, **SD:** 1.03).