# Game Design Document (GDD)

Project Title: NINJA! Shine

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URL for project GIT repo: https://github.com/Luddzik/Yipikaye
URL for project blog: https://yipikayestudios.wordpress.com/
YouTube link: https://www.youtube.com/channel/UCM603sQopNFeZtjgCvO7dwQ

Module: AINT354
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## 1. Introduction

*NINJA! Shine* is an augmented reality stealth game for iOS and android mobile devices that uses the popular Unity engine thrusting players into the role of a ninja in feudal Japan who must escape a palace after assassinating the Daimyo of the region causing further unrest in this warring period.

## 2. Scope

Augmented reality (AR) is an exciting technology that is capturing the imaginations of developers and users alike. Vuforia for Android and Apple's recently released AR SDK (ARKit) for iOS should ensure the accelerated adoption of this technology and active userbase for years to come.

## 3. Target platform(s)

*NINJA! Shine* is slated to be released on Apple's iOS and Google's Android line of mobile devices.

## 4. Development software

4.1 Engine software

The game engine of choice was Unity by Unity Technologies. Unity provides a platform for creating games and other applications that use game technology. A variety of assets such as models, sprites, audio files etc. can be imported and fused together in a framework using C#.

4.2 Programming software

The programming software of choice is Visual Studio 2017 using the C# programming language. Additionally, we are using XCode for the ARKit implementation.

4.3 Artwork software

The artwork software of choice was Microsoft PowerPoint along with Adobe Photoshop used to add colour to sketches of the main character and enemy guards. Blender was utilised for the 3D asset creation.

## 5. Specification
5.1 Concept

You are posed as a ninja who has just assassinated a powerful warlord. Slip away quietly before anyone knows. Use your light ability to provide better vision of your surroundings shining it in any direction. Pick-up collectibles along the way to earn stars and unlock rewards. Slip passed your enemies unnoticed using the cover of darkness. Shine in the shadows…

5.2 Story

The Daimyo Heihachi Sousuke has been assassinated. Iga-mono must now escape Momiji Palace using his mastered techniques and the cover of shadows before all hell breaks loose. What will the consequences of his actions be…

5.3 Setting

The game takes place in Japan at an unspecified time during the Sengoku period (1467 – 1603) also known as the 'Age of Warring States'. It is set in a palace located in the fictional Koyo (Red Leaves) Province. The player is a ninja from the renowned Iga school.
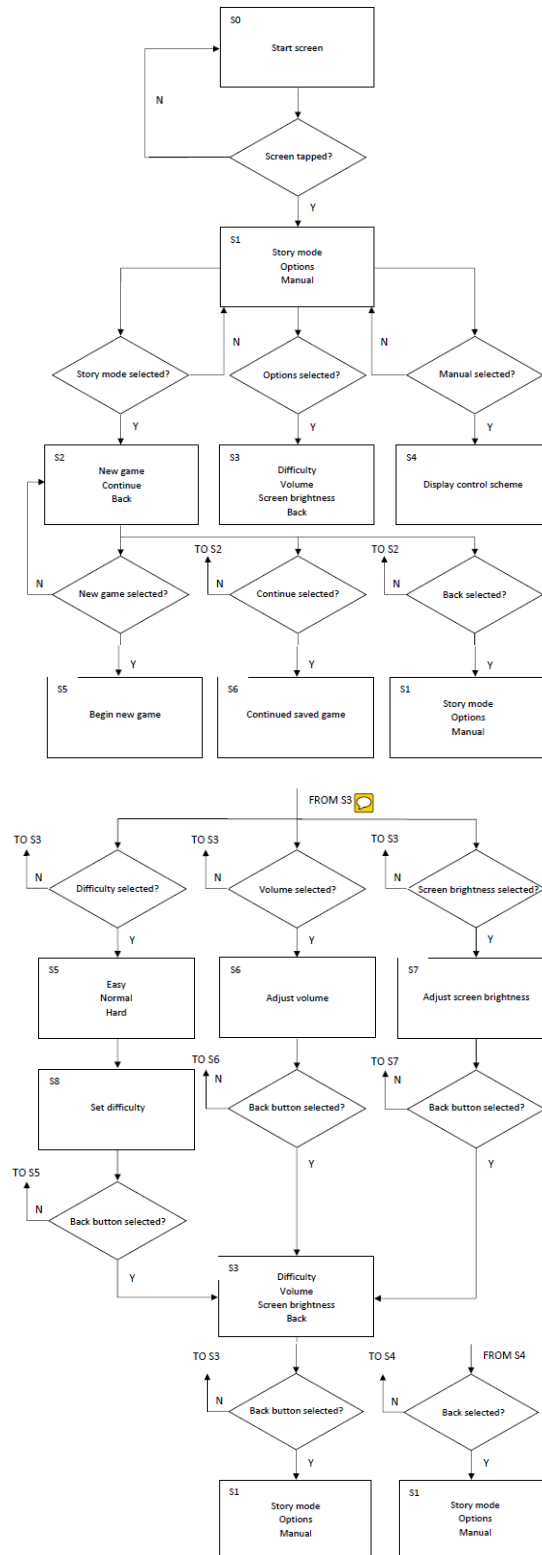
## 5.4 Game structure



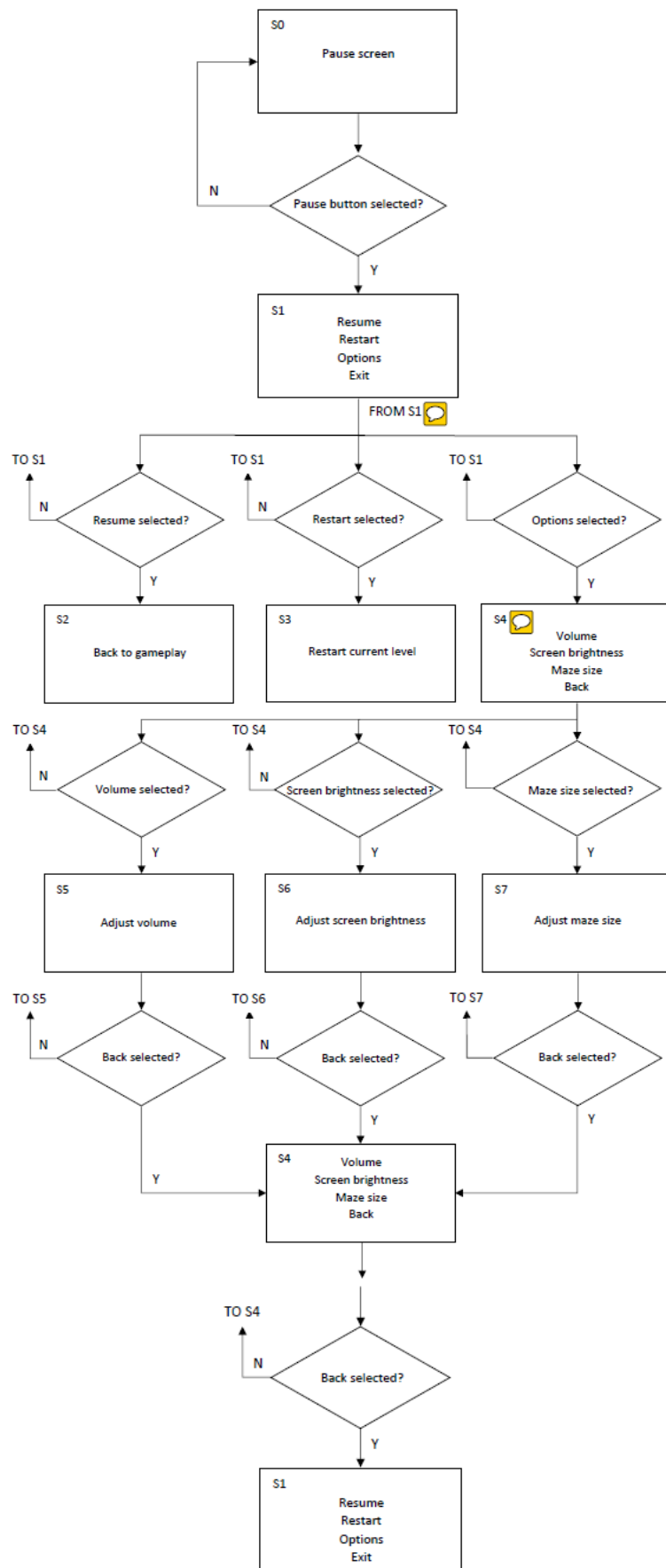**Figure 1.** Start screen user interface (UI) flowchart.

**Figure 2.** Pause screen user interface (UI) flowchart.

5.5 Players

NINJA! Shine contains a single-player campaign mode.

5.6. Actions

You control the ninja navigating through the palace level towards the exit whilst avoiding the enemy guards by using your 'shine' ability. This technique extends the light range of the ninja in the direction he is facing for a limited time. The direction of the light source is dictated by the direction your mobile device's camera is pointing.

5.7 Objectives

To escape the palace unseen by avoiding enemy guards using your ability. Pick up collectibles along the way to earn stars which unlock rewards.

## 6. Graphics
6.1 Styles
- Dark setting (night time) to promote the stealth element
- Japanese backdrop; ninjas, samurais, wooden and stone castles

6.2 Fonts
- AR Essence

6.3 Colours

Main character – Iga-mono
- Suit: #020018
- Head band: #D4D4D4
- Head Plate: #929292
- Sun Glasses: #FF6F00
- Skin: #FFDEA3
- Scarf: #632727
- Armlet Stone: #2498B6
- Armlet Stone Holder: #706256
- Armlet: #636363
- Belt: #261902
- Shoes: #FFA826
- Glove: #1E1E1E

Enemy – Guard
- Skin: #FFDCA7
- Hair: #333333
- Mouth: #FF5A00
- Top Straps: #000924
- Top: #25297E
- Katana: #BABABA

- Belt: #745A32
- Short: #040017
- Shoes: #000000

Interior door

- Wood Plank: #C78B4C
- Paper: #FFEEE1
- Wood Frame: #925819

Main exit

- Pillars: #7A2A13
- Door: #9F0000
- Handle: #FFD800
- Steps: #A7A7A7

Pickup (ability) – Scroll

- #000000
- #A30E0E
- #3A210AFF
- #293656

Pickup (health) – Heart

- #FF3A3A

Lantern

- Body: #6D6D6D
- Light: #FF7900

Castle wall

- #E8E8E8
- #2B2B2B
- #444646
- #8E8E8E

Text

- #FFFFFF
- #FF3300
- #FFFF00

Difficulty menu (background)

- #C00000
- #FBE5D6
- #000000
- #548235
- #EECE95

In-game UI

- Health bar: #FF0000
- Ability bar: #008AFF
- Pause button: #D0CF12, #000000
- Ability Button: #DCAD3A, #7B7A79

6.4 Influences

Amnesia: The Dark Descent by Frictional Games was the primary source of inspiration for the 'dark world seen only by the light source wielded' motif in our game. The tense atmosphere this creates along with the claustrophobic nature of the levels is what keeps the player hanging off the edge of their seat.



**Figure 3.** A level from Amnesia: The Dark Descent.

The bold and striking design of Tekken 3's start screen inspired us to create something similar with NINJA! Shine. It is primarily eye catching and sets the tone.



**Figure 4.** Tekken 3 start screen.

We wanted our ninja to have an original design that set him apart from the general look that is associated with a ninja. Investigating the weird and wacky world of Studio Trigger's Ninja Slayer animation assisted us with this, specifically the main character seen in *figure 5*. His strikingly coloured outfit, with belt strappings accompanied by a trailing scarf contributes to the memorable design of this character.



**Figure 5.** Fujikido Kenji from the anime Ninja Slayer.

Furthermore, it was a desire to have a ninja character with a chibi style design. The non-proportional models in the console game Mini Ninjas provided the standard we were aiming for with added exaggeration.



**Figure 6.** Chibi style characters from Mini Ninjas.

6.5 Look & Feel

NINJA! Shine's aesthetic draws heavily from the time period it is based in. We wanted to make sure that the player could experience something as close to the real-life occupation as possible with the addition of supernatural abilities. The player can increase the environmental lighting around them to see the enemy guards and discover pickups which generate an outline if they're not within the range of the ability.

The original character designs shown in *figure 7* stay faithful to a degree to the outfits worn by the people of that period with additions mostly to the ninja to make him more appealing to our audience.
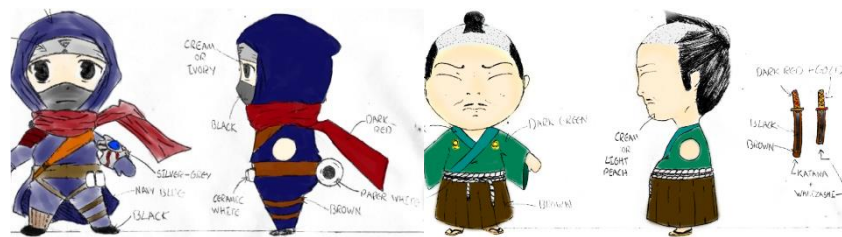


**Figure 7.** Concept sketches of our ninja and enemy guard in the chibi art style.

# 7. Data storage

## 7.1 Local data
Local storage is used to keep track of the player progress.

## 7.2 Online data
No online data component is included in NINJA! Shine.

## 7.3. Social data

No social data component is included in NINJA! Shine.

## 7.4 Statistical data
No statistical data component is included in NINJA! Shine.

## 7.5 Legal and Ethical Considerations
NINJA! Shine contains no material likely to offend or harm. Anything that is not copyrighted is used for educational purposes.

## 8. Gameplay
### 8.1 World

Koyo province is an area known for its colourful leaves during the autumn season attracting travellers from far and wide who come to witness this natural phenomenon. The other main attraction is the residence of the Daimyo, Momiji Palace. A multi-story fortress that has withstood many invasions attempts, Momiji is said to be the proving ground for all who wish to become Shogun. It's brilliant white exterior contrasts with the blood-red interior filled with an exhibition of the finest artefacts found in Japan, only second to the Emperor's private collection. Looking beyond the palatial architecture and vivid vegetation reveals the true nature of this province which is embroiled in political intrigue and near constant conflict causing casualties to both soldiers and civilians. Legend has it that the countless bloodshed is what gives the surrounding flora it colour.

### 8.2. Object types

NINJA! Shine offers a few objects that the player can pick-up and use to fulfil their objective. These include:

- Life – a heart shaped pick-up that restores HP
- Scroll –  a rolled-up parchment that restores chi energy allowing the Shine ability to be used.
- Exit – push the doors open upon clearing the last floor level
- Enemy – patrolling different rooms. Player loses health if they come into contact with them.
- Door – automatically opens when a character walks near it
- Wall – stops character from crossing to the other side.
- Folding screen – has the same function as the wall, but is smaller and is placed inside a room
- Symbol – mystic symbols that serve as a collectible. Can be used to achieve higher rating in a level and receive rewards.

### 8.3 Controls
Swipe control system to move your character. Tap to interact with the UI and ability button.

8.4. Direct control

Swipe – in the direction the player wants to move.



**Figure 8.** Ability button.

The shine button is a static graphic that when tapped, causes the illumination around the character to increase temporarily exposing more of the level to the player.

8.5 Indirect control

The enemy guards patrolling the rooms of the palace. If they spot you, they will proceed to chase after the ninja.

## 9. Supported hardware

Android version: 4.2 (Jelly Bean) or later
Apple version: Devices containing the Apple A9 chipset or later processors: iPhone 6S or later, iPad (2017), iPad Pro
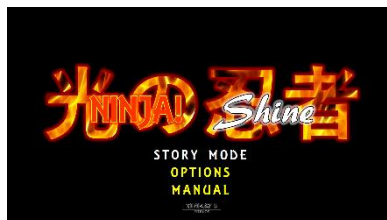
## 10. Screens & menus

10.1. Splash Screen



**Figure 9.** Start screen.

**Figure 10.** Game mode selection 1.



**Figure 11.** Game mode selection 2.

10.2 Game Interface



**Figure 12.** In-game UI.

10.3. Pause menu



**Figure 13.** Pause screen.

10.4 Options

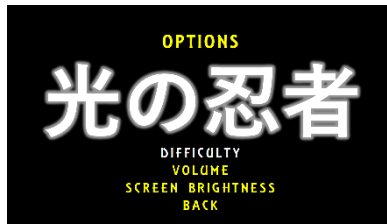Along with the following options below, there will be an option to have the Field of View (FOV) of the ninja.



**Figure 14.** Options menu.

10.5 Game Over



**Figure 15.** You died screen.



**Figure 16.** Game over screen.

## 11. Credits

11.1 3rd party resources

Mixamo: Character Animation

Mini Ninjas OST – Peter Svarre

Okami OST – Rei Kondo, Masami Ueda, Hiroshi Yamaguchi, Akari Groves

Sound recording equipment – Samson Meteor Mic

Unity Standard Asset – Cross Platform Input

Images: All images in this document belong to their respective owners.

11.2 Tutorials

1. Field of view visualisation (E01): https://www.youtube.com/watch?v=rQG9aUWarwE
2. Maze Design: http://gwydir.demon.co.uk/jo/maze/design/index.htm

11.3 Library
1. Unity
2. Vuforia
3. ARKit