



Ninja Frontier

Team Ninja, CSE 5912, Fall 2022

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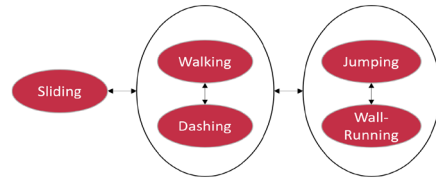
Summary

Ninja Frontier is a First-Person momentum-based platformer that gives players many options on different ways to experience levels in a fast-paced setting. Players will need to become adept with their use in double jumps, wall-runs, slides, dashes, and slams to complete levels as fast as possible.

Movement Mechanics

Custom made a state machine for each movement state the player will be in.

- Each movement state (on the ground, jumping, wall-running, dashing, and slamming) has its own class that dictates its behavior.
- The movement states were paired with both the animation and the sounds for the player.



Level Design

Ninja Frontier contains one tutorial and three playable levels. Each level was laid out and designed by members of Team Ninja. All levels contain a respawn point and an end goal.

- Hint system to assist the player as they play through the game.
- Focused on obstacles for wall-running, sliding, slamming, dashing, and jumping.



Saving and Loading

Ninja Frontier requires minimal data to be saved locally and relies on JSON (as serialized from a custom SaveFile class) to make saving and loading as simple as possible.

- The data saved includes medals earned and times for each level
- Data is only saved after completing a level.



Combat System

Ninja Frontier contains two enemies to perform combat with: a knight and a turret.

- The knight has four different states: idle, walking, running, and attacking. All of these are dependent on the knight's current distance from the player.
- Whenever the player is in the turret's sphere collider, it targets and shoots the player.
- Players can attack through melee combat with a sword and ranged attacks with shurikens.



Inventory System

The player's inventory contains three items: sword, shuriken, and exploding shuriken. The sword is always in the player's possession, and the two shurikens must be picked up by the player.

- Items are picked up as the player enters the collider of items on the ground.
- The UI displays how many of each item are in the player's inventory.



UI Design

The UI system of Ninja Frontier is largely built on Unity's UIToolkit technology.

- Dynamic UIs are easy to maintain and adjust while being highly customizable.
- Controller classes are simple, flexible, and extensible.
- Largely gamepad-friendly.

