

Research And Development

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CHARACTER

Research Overview

Main Game Inspirations



GAME TITLE: Blasphemous

Genre: Metroidvania action-adventure
Platformer



GAME TITLE: CELESTE

Genre: 2D Platformer



GAME TITLE: Hollow Knight

Genre: Metroidvania action-adventure
Platformer



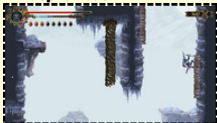
GAME TITLE: Dead Cells

Genre: rogue-lite metroidvania action
platformer

Research Overview

Character Breakdown

Blasphemous



MOVEMENT:

Character can move left and right

Character can jump

Character can wall jump

Character can double jump

Character can crouch

Character can Dash/Roll

Abilities Interacting with each other:

Character can move and jump at the same time

Character can jump and move as well

Character has very good air control

Character has invincibility frames while rolling



Attack:

Character cannot move and attack

Character can jump and attack

Character can crouch and attack as well



Research Overview

Character Breakdown

Dead Cells



MOVEMENT:

Character can move left and right

Character can jump

Character can wall jump

Character cannot crouch

Character can Dash/Roll

Character can double jump

Abilities Interacting with each other:

Character can move and jump at the same time

Character can jump and move as well

Character has low air control

Character has invincibility frames while rolling

can only dash left or right



Attack:

Character can move and attack simultaneously

Character can jump and attack

Character can crouch and attack as well



Research Overview

Character Breakdown

Hollow Knight



MOVEMENT:

Character can move left and right

Character can jump

Character can Dash/Roll

Character can double jump

Abilities Interacting with each other:

Character can move and jump at the same time

Character can jump and move as well

Character has low air control

Character has invincibility frames while Dashing

Character Can dash in air

Character can only dash left or right



Attack:

Character can move and attack simultaneously

Character can jump and attack

Character can crouch and attack as well

Research Overview

Character Breakdown



MOVEMENT:

Character can move left and right

Character can jump

Character can Dash/Roll

Character can double jump

Abilities Interacting with each other:

**Character can move and jump at
the same time**

Character can jump and move as well

Character has great air control

**Character has no invincibility frames while
Dashing**

Character can dash any direction in air



Attack:

Character cannot Attack

Research Overview

Character Breakdown Table

CHARACTER BREAKDOWN

Comparison Chart

MOVEMENTS AND ABILITIES	CELESTE	HOLLOW KNIGHT	DEAD CELLS	BLASPHEMOUS
left/right	1	1	1	1
Jump	1	1	1	1
Crouch	0	0	0	1
Dash/Roll with I frame	0	1	1	1
WallJump	1	0	1	1
Attack	0	1	1	1
Attack in Air	0	1	1	1
Jump After WallJump	1	0	0	1

Research Overview

Player Character Breakdown Table

Comparison Chart
PLAYER
CHARACTER
BREAKDOWN

MOVEMENTS AND ABILITIES	NINJA
left/Right	1
Jump	1
Crouch	0
Dash/Roll with 1 frame	0
WallJump	1
Attack	1
Attack in Air	0
Jump After WallJump	1
Double Jump	1
Moving while Attacking	0

Research Overview

Player Character Movement And

Abilities Breakdown

Jump:

Max 2 Jumps



Dash:



Jump Dash:



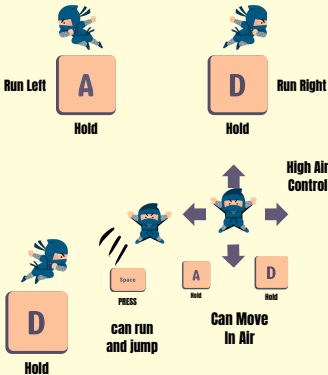
(Can double jump and dash as well)

Research Overview

Player Character Movement And

Abilities Breakdown

Movement:



Research Overview

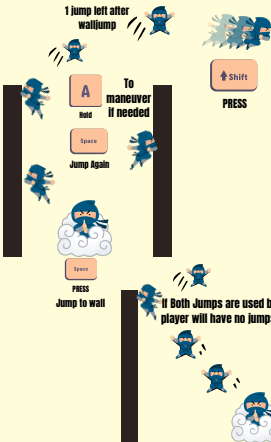
Player Character Movement And

Abilities Breakdown

WallJump:

can dash after

1 jump left after
walljump



Research Overview

Player Character Movement And

Abilities Breakdown

Attack:



Hold To keep shooting Lightning



Cannot Move While Attacking



Cannot Jump While Attacking

Health:

Healthbar System



Research Overview

Player Character

For my Player character I have decided to go for a somewhat ninja like character since a ninja is nimble and fast which would suit the platformer I am going for.



CAMERA

Research Overview

Main Game Inspirations



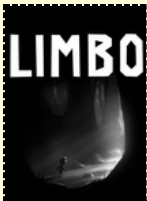
GAME TITLE: RAYMAN LEGENDS

Genre: 2D Platformer



GAME TITLE: OXENFREE

Genre: 2D Adventure



GAME TITLE: Limbo

Genre: 2D Puzzle Platformer

Research Overview

Camera Breakdown

OXENFREE



Camera Type:

Window Tracking camera



Allows the player to get a scope of the area while moving.

This type of camera dynamically adjusts based on the players movements in the game world which allows for fluid transitions from Area to area. In this case it follows the main character alex.

Research Overview

Camera Breakdown

LIMBO



Camera Type:

Fixed Camera



This type of camera creates cinematic experiences for the player as you navigate through the game.

This type of camera remains stationary when the player is in a specific area in the game or room.

Research Overview

Camera Breakdown

Rayman Legends



Camera Type: Position Lock Camera



This type of camera helps with fast paced action where the player can keep track of the character and the surroundings at the same time.

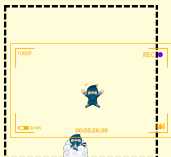
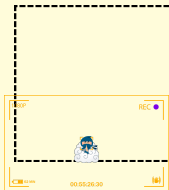
This type of camera follows the players movement but remains stationary and locked on the character no matter where he goes in this case it follows Rayman here.

Research Overview

Player Camera Breakdown

Position Lock Camera:

For my game I have chosen to go with a position lock camera since it would best suit the movement of the character and with the game being heavily platformer based this would be the best option.



no matter where the player moves gains height or speed the camera will always stay on the player.



OPPOSITION

Research Overview

Main Game Inspirations



GAME TITLE: DOWNWELL

**Genre: 2D Vertical Scrolling rougelike
platformer**



**GAME TITLE: Castlevania Symphony
of the night**

Genre: 2D Action Adventure Metroidvania

Research Overview

Opposition Breakdown

DOWNWELL



Enemies in DOWNWELL have an element of surprise to them which keeps the player always on their feet this is due to the enemies spawning suddenly.

CastleVania Symphony of the night



Enemies in CastleVania just detect the player and move towards them eventually initiating their attack when they are close enough this keeps things simple.

Research Overview

Opposition Breakdown



Player Entering the detection radius spawns the enemy keeping the element of surprise when the player is platforming through the level



Enemy approaches the player on ground only and follows the player wherever he goes and deals damage

This will be kept simple so the level flows nicely



Grey saw trap deals damage



Red saw trap insta kills

WORLD

Research Overview

Main Game Inspirations



GAME TITLE: SONIC MANIA

Genre: 2D Platformer



GAME TITLE: DONKEY KONG

Genre: 2D Platformer



GAME TITLE: CELESTE

Genre: 2D Platformer

Research Overview

Main Game Inspirations

SONIC MANIA



Sonic Mania known for its fast paced platforming has interactable jumpads the player can step on to gain height quickly throughout the level.

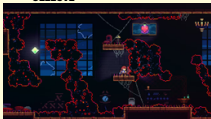
This keeps the traversal fun since the player is constantly using different traversal options.

DONKEY KONG



Donkey Kong has kong letters you can collect to enter secret levels. Collectibles can also be used to make the player progress through levels

CELESTE



CELESTE has strawberries u can collect which contribute towards the player health

Research Overview

World Applications



Use The Jumpad to Gain Height



Player Can pickup Health pickups to gain health

level1



level2



Player Has to pickup scrolls to progress to the next level

