Project Inkbrush

2D Platformer Game in the Art Style of Traditional East Asian Paintings

By Sean Miles

Introduction

Overview

- Individual game development project in the Unity engine
- Responsible for:
  - Programming
  - Level Design
  - Gameplay Design
  - UI Design
- Developed in partnership with Patrick Siew, an Applied Design student at Lake Washington Institute of Technology, who was responsible for the art

Concept

Idea

- 2D platformer in a traditional East Asian painting artstyle

[1]

[2]

[3]

Inspiration

- Inspired by games of similar genres or visual styles:
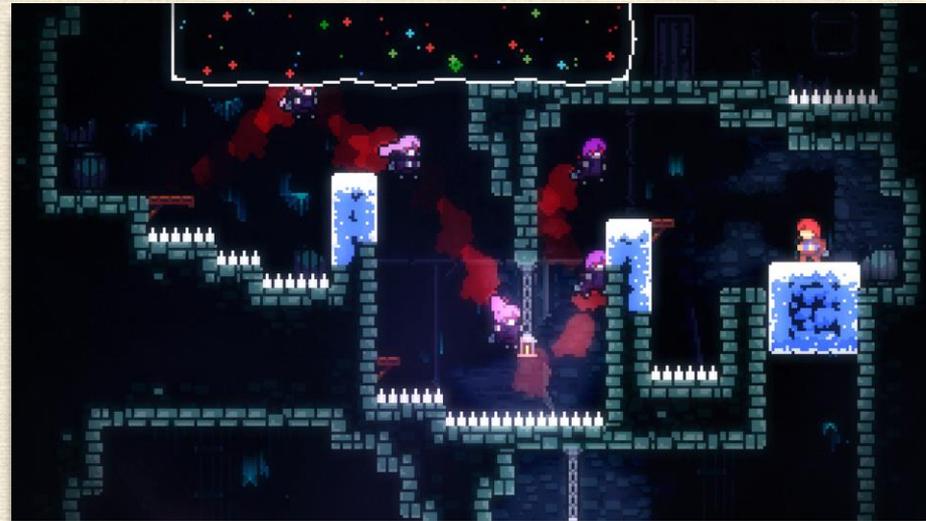
Hollow Knight

- 2D Metroidvania/Platformer
- Gameplay Inspiration

Celeste

- 2D Platformer
- Gameplay Inspiration

Okami

- 3D Action-Adventure
- Visual Inspiration

Motivation

- Desired field within software engineering is game development
- Learn about and apply firsthand the process of game development
- Expand my skills into all aspects of game development, not limited to programming
- Develop a "quality prototype" with hopeful future potential as a full game
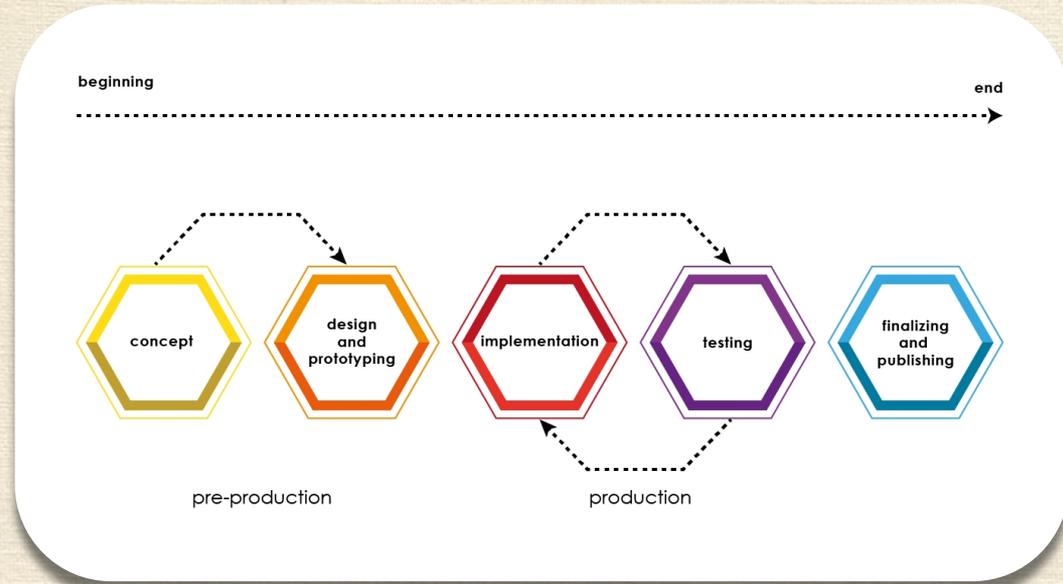
Development

Challenges

- **Large project scale and scope**
  - Narrowed scope down to functionality, with time for polish afterwards

- **Constrained amount of time**
  - Set specific milestones and requirements with deadlines, similar to sprints

- **Little to no experience in game development subfields, besides programming**
  - Organized playtesting to receive feedback and improve on prototypes
  - Conducted extensive research to learn about subfields
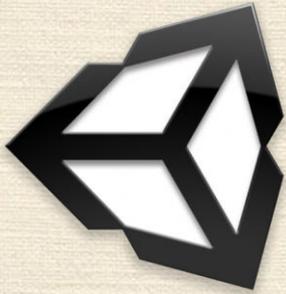 - Looked to aforementioned games for ideas and inspiration

Process

- Applied the game development process:
  - **Prototype**
  - **Playtest**
  - **Iteration & Refinement**
  - **Repeat**
- Met with advisor to report progress on milestones

beginning   end

concept → design and prototyping → implementation → testing → finalizing and publishing

pre-production   production

[4]

Tools

Unity
2D/3D Game Engine

Discord
Communication
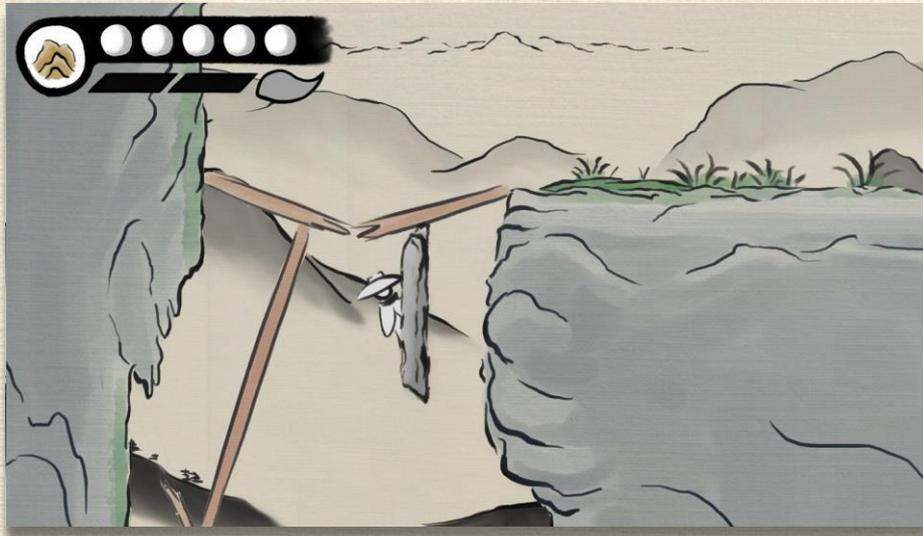
Trello
Task Delegation and Milestones

Result

Reflection

Key Takeaways

- Experience with the game development process, along with an artist
- Importance of close communication with other departments
- Significance of setting milestones to be accomplished by certain dates

Key Takeaways

- Expertise needed in game development subfields
- A polished quality prototype that can be further developed
- Overall experience in my desired field of game development

Helpful Courses

- CSS 385 - Intro to Game Dev:
    - Experience with the game development process
    - Communication with team members
- CSS 451 - 3D Computer Graphics:
    - Experience with vectors and vector math
- CSS 499 - (Research) AR Game Development:
    - Experience with the game development process
    - Communication with team members

Conclusion

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- Overall, this project has given me experience in my desired field of game development that will prove vastly beneficial in a workplace environment and future projects

Next Steps

- After the capstone's conclusion, we plan to further develop the game
- Eventually, we want to create a crowdfunding campaign to see if people are willing to fund the game's further development

Follow the project on itch.io or YouTube for updates if interested!

Download the Demo on

![itch.io] itch.io:

urlday.cc/inkbrush

Questions?

References

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4. *Workflow process of game design* [Image]. Packt. https://static.packt-cdn.com/products/9781786460271/graphics/82e951a3-98a7-45c3-8110-623e00718352.jpg