MONSTERS AND METAL

IS THE NEW POKEMON GAME FOR SWITCH TOO EXPENSIVE?
ARE YOU LOOKING FOR A MORE BRUTAL EXPERIENCE?

OUR TEAM

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External Technologies

Productivity:

> Git/GitHub

> Google Drive Office Suite

> Trello

Document/Presentation Preparation:

> LaTeX

> LibreOffice Suite

Game Development:

> Unity Game Engine

> Unity Asset Store

> MySQL

> Eclipse/Visual Studio/Vim

> JSON Simple

DATA STRUCTURES

> *Vectors* (no project is complete w/o using some implementation of the list ADT)

> *Hash Set* (for fast inventory item access for item update)

> *Directed Graph* (for Animation State Machine and Scene Manager)

> *2-d Tree* (allows us to randomly generate monster positions on scene load)

> *Hash Map* (linking marketplace listings to owner usernames)

Professional Development

- > *Artificial Intelligence- wow, did you just use a cuss … I mean buzz word?*
- > *State Machines- wait, what do you mean you don't need memory?*
- > *C# Scripting- another language to put on your resume even though you haven't mastered it*
- > *3-Dimensional Math/Linear Algebra- raise your hand if you hate math, wow that's everyone*
- > *Physics- no one understands how real physics works, and even fewer understand how game physics work*
- > *Game Design- why does it seem that STEM and creativity are in near complete complementary distribution?*
- > *Art/Animation- the hardest AND lowest paying part, that doesn't seem right*

KEY COURSES

Fundamentals:

> **MATH 225:** Linear Algebra and Differential Equations

> **PHYS 151:** Fundamentals of Mechanics and Thermodynamics

> **CSCI 104:** Data Structures and Object-Oriented Programming

Game Development:

> **CTIN 488:** Game Design Workshop

> **CTIN 484:** Intermediate Game Development

> **ITP 380:** Video Game Programming

Design and Development Decisions

The Good: ✅

> Formalizing the file structure for the backend early

> Unity (cross-platform availability/packaging)

> Meeting Every Week

> Delegating tasks based on experience

The Bad: 😢

> Passing JSONs instead of using server sockets

> No dedicated Game Designer/ Writer

> Not enough pair programming

> Using Messenger over Slack

The Ugly: ☠️

> Using a Game Engine's non-native language

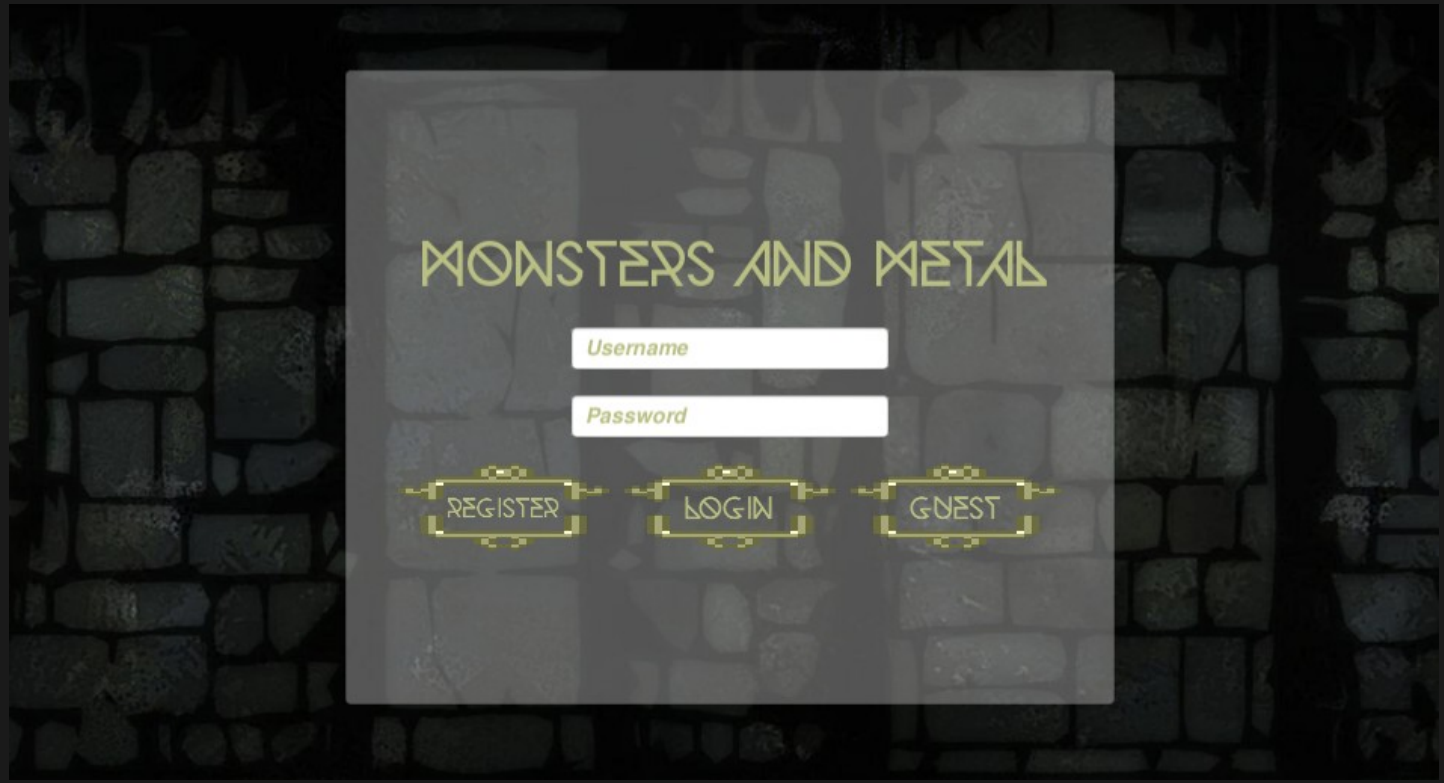
> Perforce is the gaming industry standard for version control for a reason (teamwork was severely impeded by merge conflicts)

MULTITHREADING

- *Implementing Auto-Save*
  - *One thread handles the general request for loading data, trading, and login/register*
  - *A separate thread handles unique JSON files for different players to save their records.*
- *Inherent in Games*

NETWORKING

USER LOGIN


MONSTERS AND METAL
Username
Password
REGISTER
LOGIN
GUEST


THANK YOU!!!!!!!