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## Development Blog

Wednesday 2/14/18

- I came up with the idea to create a Zelda-like rpg 2D game and started on a basic prototype with a single sprite that you could move around.

Monday 2/19/18

- I added walls and created a small test are for my game.
- I changed how the player sprite was moved from using transform.position to rigidbody.velocity so that it wouldn't phase through walls.
- Implemented a feature that the player will rotate to look at the mouse.

Wednesdays 2/21/18

- I added a weapon sprite as a child of the player sprite and spent the majority of class figuring out how to move it fluently and return back to the player while it's attacking.
- I discovered that transform.Translate would do the trick.

Friday 2/23/18

- Implemented my transform.Translate method of moving the weapon into the game along with a few bugs that came with it.

Sunday 2/25/18

- Added a slime enemy and implemented a method for it to chase the player, but it lacks pathfinding, so I need to add that latter.
- I added stats for both the player and the slime, and made it so they can damage each other.
- Added UI elements like a hp counter in the top left corner, and lose and win text.

Monday 2/26/18

- I decided that the slime enemy was boring as it was and added to its script the ability to spawn baby Slimes when the mother slime dies.
- I made the mother slime and baby slimes both be prefabs.
- Changed the code so now the Player and Slime scripts have takeDamage(int damg) functions and made it so that when the slimes die their game objects are destroyed.
- I made it so that the Slimes themselves were no longer triggers so that they wouldn't overlap each other.

Tuesday 2/27/18

- Modified the AI so that the slimes will stay a certain distance away from each other based upon a circle trigger collider that is attach as a child object.

- Added a sprite I made for the Slime and adjusted the code so that the slime now rotates to face the player.
- Moved the weapon object to inside the player object.

Wednesday 2/28/18

- Created the Creature script which is the parent script to both Player and Slime and holds universal variables and methods needed by both scripts like `m_hp`, `m_speed`, `die()`, and `takeDamage()`.
- Also learned that you need to use `override` in the method description to override a parent script's method.

Saturday 3/3/18

- Attempted to implement Ethan's pathfinder code and failed (I got a null pointer error and don't know enough about the code to fix it).
- Created the Weapon parent script that holds universal variables and methods for all weapons like `m_atk`, `m_speed`, and `m_reach`.
- I created a new enemy called Lizardman who carries and attacks with a spear
- I created a new weapon a spear which has a greater reach than the sword and attacks faster, but deals less damage per hit
- I gave the Lizardman some basic pathfinding code to attack its enemy when it gets close
- Implemented a way for the lizard man to throw the spear at the enemy at a certain distance.

Sunday 3/4/18

- Improved upon the lizardman's spear throwing code and AI so now it will not go after the player when it's far away and will move into spear throwing range when the player gets closer and will go retrieve the spear after it's thrown.
  - If the lizardman is close enough to the player for a melee attack and it's holding its spear then the lizardman will not throw its spear but rather melee attack with it.
  - Being hit with a thrown spear does double damage
  - A spear will stop if it hits a player, enemy, a wall, or has moved 5 units from its original position
  - The direction of the spear throwing is buggy and I'm struggling on how to fix it.
- Created a health bar for the player that lowers when the player is damaged
- Found a way to reimplement the win condition code so that the win text will be displayed when all enemies, indicated under the Enemies game object in the inspector, are destroyed.

Monday 3/5/18

- Fixed the spear throwing bugs by adding a kinetic rigid body to the spear so that it will stop when it hits walls, and rediscovered that transform uses the game object's local transform axis instead of the global ones.
- Attempted to implement Ethan's new Pathfinding built for monsters that chase a target. However, each one requires its own node-mesh and when the monster dies the game gives a bunch of error because the monster game object was destroyed. I have decided not to

implement an advanced pathfinding mechanic until I understand the inner workings of the pathfinder so that I can augment it into something to fits the type of game I'm building.

Tuesday 3/6/18

- Implemented a healing mechanic for all creatures and created a healing potion that will heal the player when collected (ran over).
- I made it so that the player now can choose to use either the sword or the spear and can switch between them using the 1 and 2 keys on the alphanumeric keyboard.
  - The player can even throw the spear but won't be able to attack or switch to another weapon until it's collected.
- Created a chest game object that can be opened by the player when the player is close to the chest, and the chest spawns a health potion when opened. A chest can't be opened more than once.
- Cleaned up the Player, Lizardman, Spear, and Sword scripts.