Setting and Story

RealmRPG is a fantasy based RPG set in the caves and dungeons found in the under dark (cave systems below the planets crust). The story is based around a single character who has recently awoken alone in an uninhabited cave in the lower levels of the under dark. He has no memory of how he ended up there but he does remember the reason why, to finish the task of assassinating a certain dark elf.

Details and Design

The game itself will be tile based with tiles size 32:32 pixels and the view port will be 800:600 pixels. The graphics style of the game will be entirely pixel art for the characters, items, tiles, and icons. Backgrounds will consist of pixel art, just at a larger scale than the other objects.

The game engine will consist of all the different systems that will control the entire game, all updated on the same game loop. The main systems in the game are state stack, main menu state, local game state, dialogue state, inventory state, stats state, map system, and the battle state.

**State Stack**

The state stack is the heart of the game, it controls which part of the game the player is interacting with at any given time. The state stack will have 4 default functions that every state must contain in order to be called to the stack.

onEnter: Is ran every time a new state is pushed onto the top of the stack, it sets up the new state by initializing new variables and setting game variables to the correct values.

onExit: Is ran every time the current state is popped off of the stack, local variables are reset to the default values, global variables are changed to their correct values for the previous state on the stack.

Update: updates the current objects and variables present in the current state running on the stack

Draw: Draws the objects of the current state onto the game canvas

Then the state stack contains 4 functions that help maintain the stack throughout the game.

addState: adds a new state into the possible states that the game can be in

changeState: pushes the new game state onto the stack, running the new state while maintaining the old states information

revertState: pops off the current state and returns to the previous state

returnToMenu: returns the player to the main menu, used as a “quit” option when the player is done playing

**Main Menu State**

The first state the player will see when starting the game. There will be two options, “new game” and “load game”. Pressing the new game button will create a new div element that will then utilize ajax to grab a form page that will guide the player through making a new account. Pressing the load game button will also create a new div element that utilizes ajax to grab a form page except this page will guide the player through logging into an existing account.

**Local Game State**

The local game state is the state that he game will spend most of its time in. This state controls the current map, the player, collision detection, the viewport location, and all the game objects that are present on the current map. Every other state is accessed through the local game state through either collisions or hot key presses.