Description of Scratch/Test Programs

1. **Animated Sprite Scratch**
   1. Animating a basic sprite and making them move around the map using the keyboard listener.
2. **Button Scratch**
   1. Drew a button on the screen with an action listener that said when the button was clicked the system would print out a line.
3. **Tiled Map Scratch**
   1. In this scratch code, the user controls a sprite around the game screen using the four directional arrow keys. The screen scrolls with the player, and the player can move around on top of a map drawn in Tiled. From this scratch code, we learned how to use the Tiled map editor to create a 2-Dimensional map, how to render and add that map to a game, and how to allow the screen to scroll using an Orthographic Camera.
4. **MultiScreen Scratch**
   1. Learned how to move button styles and textbutton code into separate files which is different than the button scratch in the first WIP where we had everyone in one file. All the screens are initialized on the main game level, and when the button is clicked, the game state updates and the screen switches.
5. **Tiled Collision Detection Scratch (without functional Orthographic Camera)**
   1. In this scratch, the player can move around freely on the screen with the four arrow keys, but a collision detection will occur if the player attempts to make contact with any one of the three plants on the screen.
6. **Font Scratch**
   1. Wanted to see if we could resize a font without having to create a new file. Using the freetype extension we were able to use 1 font file to create many fonts with different attributes within the code use a simple method.
7. **Battle Screen Scratch**
   1. The section of the game the player will go when they encounter an enemy on the map. We made it so that the user can choose a weapon, then go to the battle screen where you can click attack or change your weapon. When you click the attack button, dialog pops up and then disappears on a timer. When the attack button is clicked, the enemy’s health decreases immediately based on a set amount, while the hero’s health decreases a random number when the dialog disappears as well (on the same timer). When someone’s health hits zero, the screen switches to either a win or lose screen depends on who died.
8. **Save Scratch**
   1. The code allows a player sprite to move around the screen on a Tiled map, saving its x and y-coordinates to an xml file on the computer. When the player closes and reloads the game, it starts the player sprite at those same x and y-coordinates.
9. **Overlap2D Scratch**
   1. Overlap 2D is a graphical Approach to Assets, and a far easier way to get things to look exactly how you want them, because they can be physically moved. It auto organizes assets into folder based on file type It also frees up a lot of space because the code is greatly simplified. This allows for easy resizing, and is ideal for side scrollers and UI. This was not integrated into our main project, it was just a side scratch to decide if we wanted to use it in the main project but in the end we decided not to
10. **Tiled Collision Detection Scratch (with functional Orthographic Camera)**
    1. This scratch builds off of the original Tiled Collision Detection Scratch, by adding a functional Orthographic Camera that scrolls with the player, but prevents the player from moving off of the limits of the game map. The player moves around on the Tiled map using the four arrow keys, and when the player makes contact with any of the map obstacles, the game will prevent them from moving any further, moving them back one frame.