Ps0: SFML Hello World:

Assignment Description:

This was the first assignment given to us in Computing IV this assignment was simple and was to build a simple GUI environment using SFML. This assignment tasked us to create a sprite and to have the sprite move across the screen and to have an extra function for the sprite. This assignment seemed to be mostly for us to correctly install Linux and the SFML libraries.

Key concepts and Algorithms:

This assignment did not have any algorithms for us to use like in later assignments. Instead the key concept need to finish the assignment was knowledge on how to use sprites in SFML and experience using the Spite and Drawable classes.

For this assignment I used a photo of Pikachu but with Homer Simpson's face instead as my sprite and another Simpson's themed background for the program. My sprite moved with the keyboard and shift would make the sprite rotate.

What I learned in this assignment:

This assignment taught me about making programs with a GUI. Other than learning how to use SFML this program didn't teach me anything that I didn't already learn in other computing classes. I already had experience in a Linux environment from Computing II and using it on my own personal machine.

Ps0 Screenshot:

Ps0 Source Code: main.cpp

```
1  // Name: John Simonson
2  // Date: 1/27/2020
3  // Assigment: ps0
4  #include <SFML/Graphics.hpp>
5
6  int main()
7  {
8      sf::RenderWindow window(sf::VideoMode(300, 250), "HW0");
9
10     sf::Texture texture;
11     if (!texture.loadFromFile("sprite.png"))
12         return EXIT_FAILURE;
13     sf::Sprite sprite(texture); //Load Sprite png to sprite
14     sf::Texture background;
15     if (!background.loadFromFile("background.png"))
16         return EXIT_FAILURE;
17     sf::Sprite Background(background); //Load Background png to sprite
18
19     while (window.isOpen())
20     {
21         sf::Event event;
22         while (window.pollEvent(event))
23         {
24             if (event.type == sf::Event::Closed)
25                 window.close();
26         }
27         window.setFramerateLimit(120); //set framerate
28         window.clear(); // clear window
29         window.draw(Background); //Load background
30         window.draw(sprite); // Load sprite
31         window.display(); // display
32         if (event.type == sf::Event::KeyPressed){
33             if (event.key.code == sf::Keyboard::Up)
34             {
35                 sprite.move(0.0, -2.0); // move up
36             }
37             if (event.key.code == sf::Keyboard::Down) // move down
38             {
39                 sprite.move(0.0, 2.0);
40             }
41             if (event.key.code == sf::Keyboard::Left) // move left
42             {
43                 sprite.move(-2.0, 0.0);
```

```
44              }
45              if (event.key.code == sf::Keyboard::Right) // move right
46              {
47                  sprite.move(2.0, 0.0);
48              }
49              if (event.key.code == sf::Keyboard::LShift) // rotate clockwise
50              {
51                  sprite.rotate(10.f);
52              }
53          }
54      }
55
56      return 0;
57  }
```