

Assignment Statement

Using assembly with the Raspberry Pi

Objective

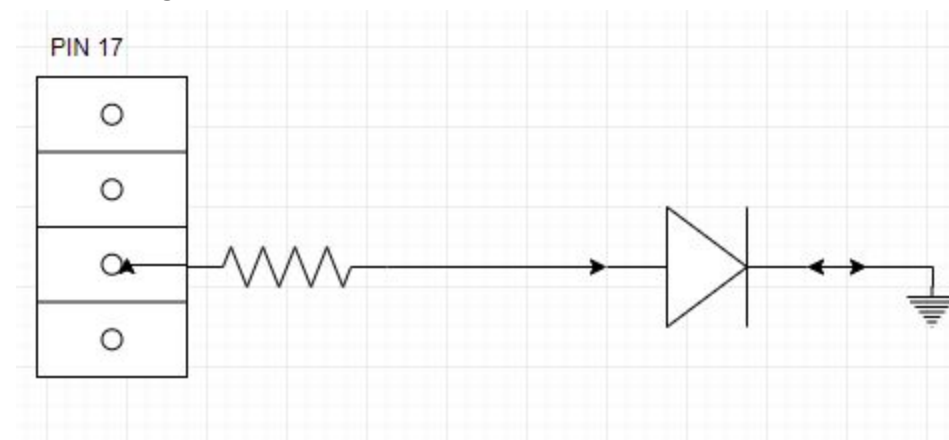
The purpose of this lab is to get familiar with the arm assembler. By writing simple scripts similar to assignment 1, we can implement the assembly code without having to worry about new hardware being introduced.

Approach

To get the assembly code, we wrote C code that uses system calls and used the command -S to turn the C code into assembly code. From there we compiled the assembly code and ran it on the Pi.

To get a pwm we created two states, an on and an off, for the GPIO pin. Within each state, we had a delay of differing microseconds which would make the GPIO pin operate at different duty cycles which generates a pwm.

Circuit Diagram



Results

We were able to successfully turn the C code into assembly instructions and compile the assembly to get a blinking led and pwm behaviour.