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**Pseudo-code for the Servo module** (This module will initialize the shooter servo and contain the functions to control it)

**ServoInitHardware** (Initializes and configures hardware for PWM use)

Takes nothing, returns nothing

Initialize PWM hardware if not already by calling PWM\_InitHardware

Set servo PWM frequency by calling PWM\_SetFrequency and passing servo PWM frequency to the right channel

Initialize to the start position by setting the duty to the home position pulse

End of ServoInitHardware

**ServoHomePosition** (Changes servo position to the homeposition)

Takes nothing, returns nothing

Set servo PWM period to the minimum servo pulse, which corresponds to home position

End of ServoHomePosition

**ServoShootingPosition** (Changes servo position to the shooting position)

Takes nothing, returns nothing

Set servo PWM period to the maximum servo pulse, which corresponds to shooting position

End of ServoShootingPosition

**Servo Test Harness** (A simple main to test the functionality of the servo module)

Defines: TEST

Main: Begin test harness to test effectiveness of functions in PWM\_module

Takes nothing, returns nothing

Set the clock to run at 40MHz using the PLL and 16MHz external crystal

Initialize UART to communicate via USB

Clear the screen

Print test harness information, data, and time

Call ServoInitHardware to initialize servo hardware

Loop through While forever

    If the function IsNewKeyReady returns true

        Then call getNewKey to store value in newKey

        Switch between cases

            newKey is h

                Call ServoShootingPosition to move servo to shooting

                Break, end of case

            newKey is s

                Call ServoHomePosition to move servo to home

                Break, end of case

        End of switch

    End of if

End of Main in the Test Harness