Lab 3-1 part 2 Pseudo Code

# Main

compiler directives

declare global variables

define global constants

function prototypes

main function

Initialize system, ports, and PCA

Print beginning message

CalbibrateSteering

Begin infinite loop

Steering\_Servo

End infinite loop

End main function

# PCA Interrupt Service Routine

If the counter overflow flag is set

Clear the flag

Set PCA0 to the value that corresponds to 20ms

Clear all other PCA interrupts

End ISR

# Calibrate Steering

Set pulse with to center

Prompt user to center the car

Turn the car to center

Save the value and display the pulse width

Prompt user to turn the car left

Turn the car to the left

Save the value and display the pulse width

Prompt user to turn the car right

Turn the car to the right

Save the value and display the pulse width

Display all the bounding pulse widths

End Calibrate Steering

# Turn

Declare local variables

Wait for a key to be pressed

While ‘k’ is not pressed

If ‘r’ is pressed

Increment the pulse width by 10

If ‘l’ is pressed

Decrement the pulse width by 10

Set the pulse width in PCA

End while loop

End Turn

# Steering Servo

Declare local variables

Wait for a key to be pressed

If ‘r’ is pressed

If incrementing the pulse width by 10 will not go over right bound

Increment the pulse width by 10

If ‘l’ is pressed

If decrementing the pulse width by 10 will not go over left bound

Decrement the pulse width by 10

Set the pulse width in PCA

Print the pulse width value

End Steering Servo