Lab Test 3 Tips

- Example code to interface to the OUSB will be provided in the Lab Test Proforma.

What will the autotester test for?
REMEMBER TO WRITE YOUR ERROR TESTS IN ORDER OF SPECIFICATION IN THE PROFORMA!
The autotester will perform the following series of tests and check for the correct response from your program:

- Correct input parameters (letter range) i.e., B, D, R, Y, G, CR, CY and CG letters only
- Correct number of input parameters (where only the B or D command can be used without or with a number following)
- More than three input parameters
- Correct input parameters (number range only):
    - B and D command: 0 to 255 (inclusive)
    - R, Y, G, CR, CY and CG command: 0 to 15 (inclusive)
- Reading from PORTB and PORTD
- Writing to PORTB and PORTD
- Correctly transitioning the traffic light state machine starting from R, Y and G for the number of steps specified on the command line.
- Remember to check for disconnected OUSB board (i.e., the Murphy's Law tests).
- Remember that all numerical arguments must be an unsigned integer value, therefore if a decimal or exponential number is provided as an argument, your program should also respond with the correct error character. Remember that there is a strict order of precedence that the error characters are ranked in. See E1 in the proforma.

Sample Lab Test executable
A sample executable (LabTest3_Sample.exe) has been provided on the Canvas Shell. Check the behaviour of your solution against the output produced by the sample binary for given input arguments. You will need to run this exe file using the Windows command prompt (cmd.exe - can be searched for from the Start menu). Make sure that you run LabTest3_Sample.exe from a directory that also has ousb.exe.

The program will respond correctly as per the Lab Test 3 proforma requirements. Please note that a 0.5 second delay has been added in-between traffic light state transitions for visibility of the state transitions on PORTB, but this is not necessary for your Lab Test 3 submission.