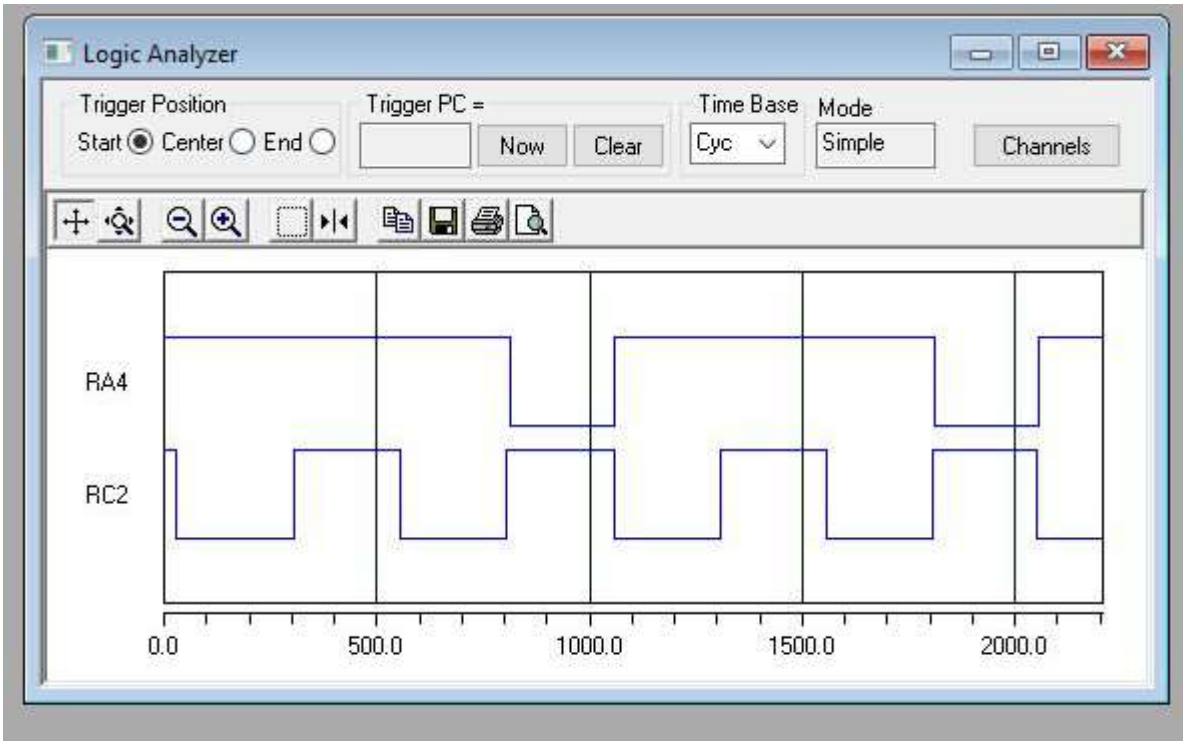
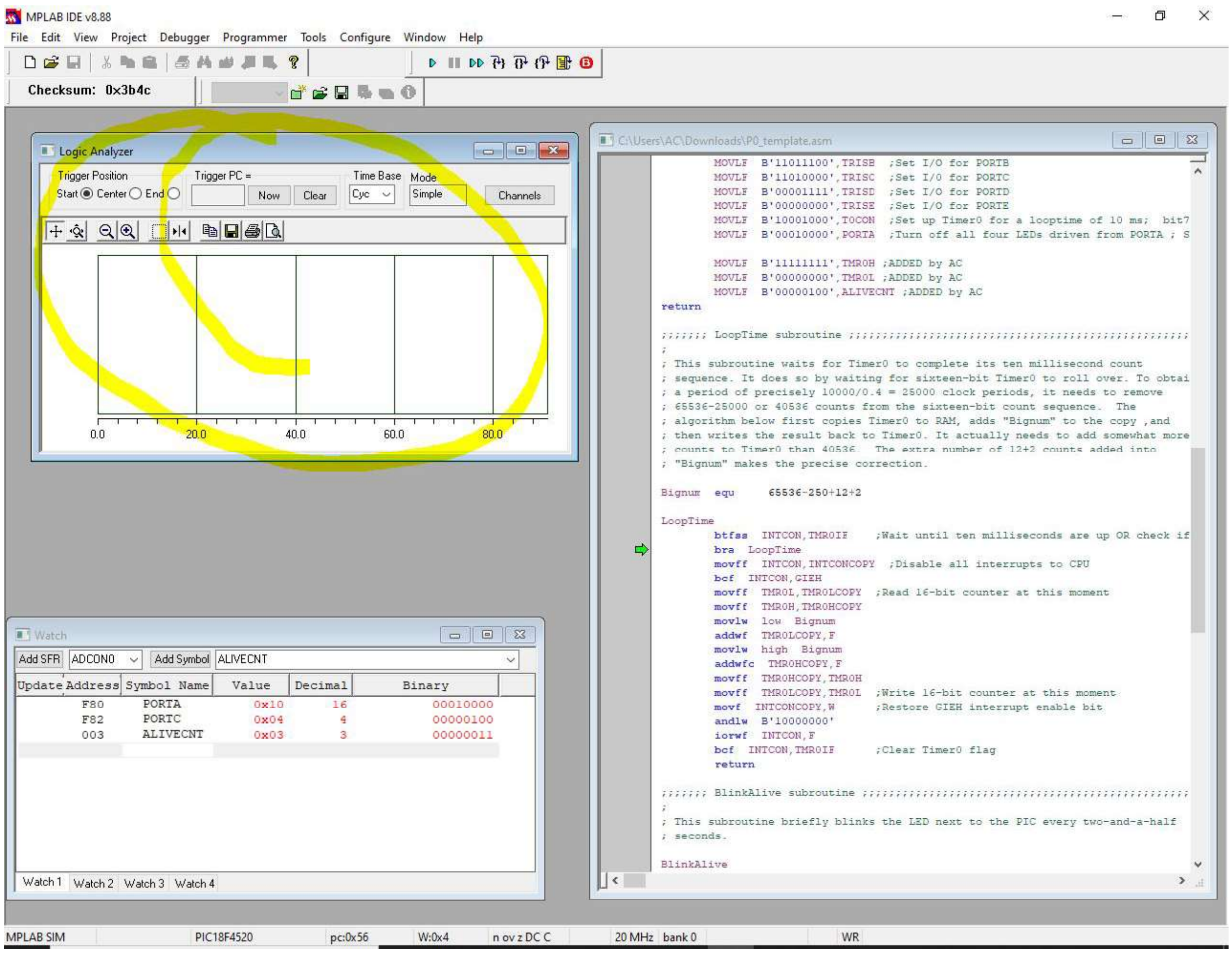
MPLAB IDE Logic Analyzer

Once you have set up the IDE simulator, as shown above, now you can use the embedded logic analyzer to monitor how the states of particular bits in certain registers change with time. For example, with respect to "P0_template.asm," we can analyze how the states of bits **RA4** and **RC2** change as the program is simulated as shown below

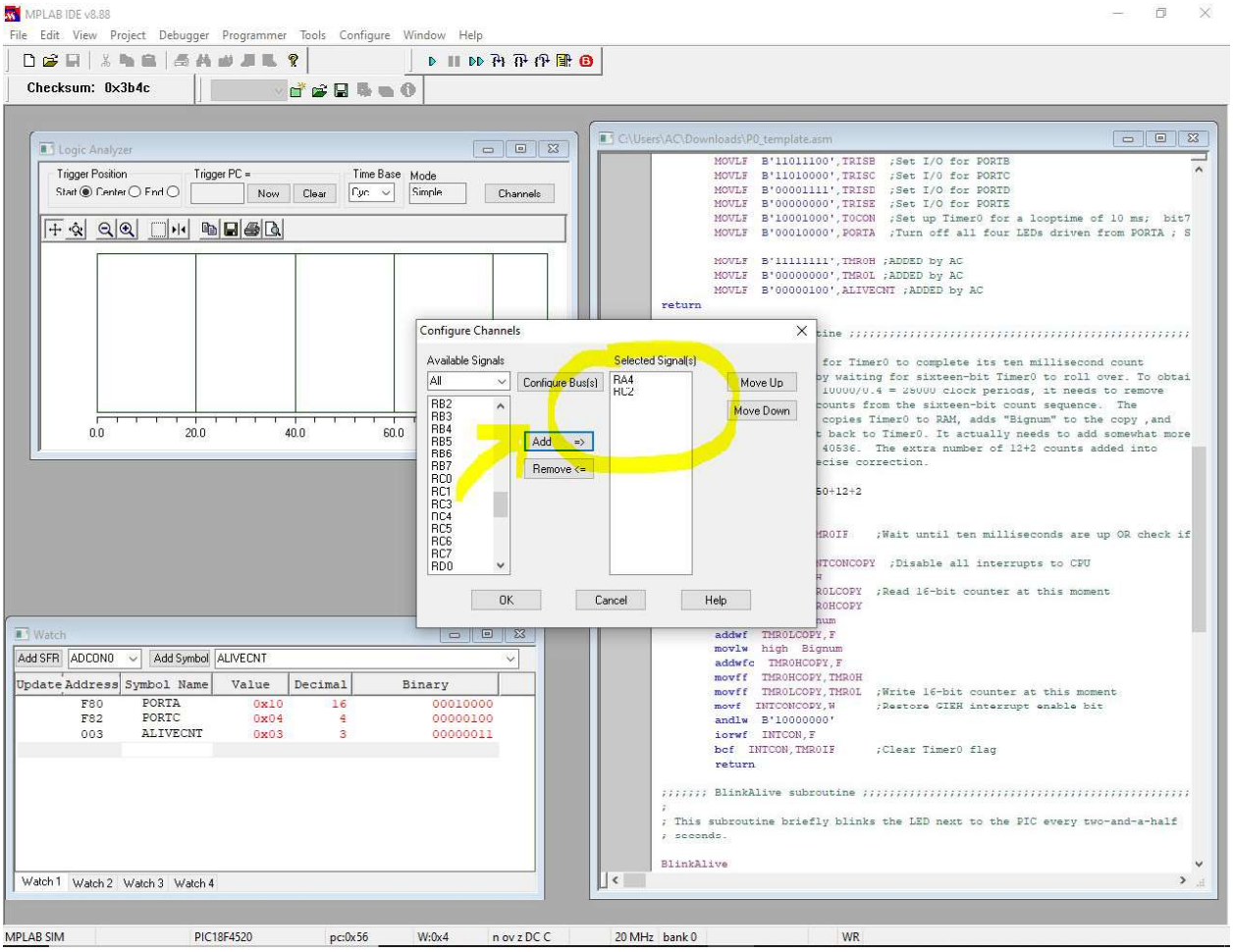


Please note that the following instructions assume that you have already set up the MPLAB SIM tool (as shown at the beginning of this tutorial) and that your code has been compiled.

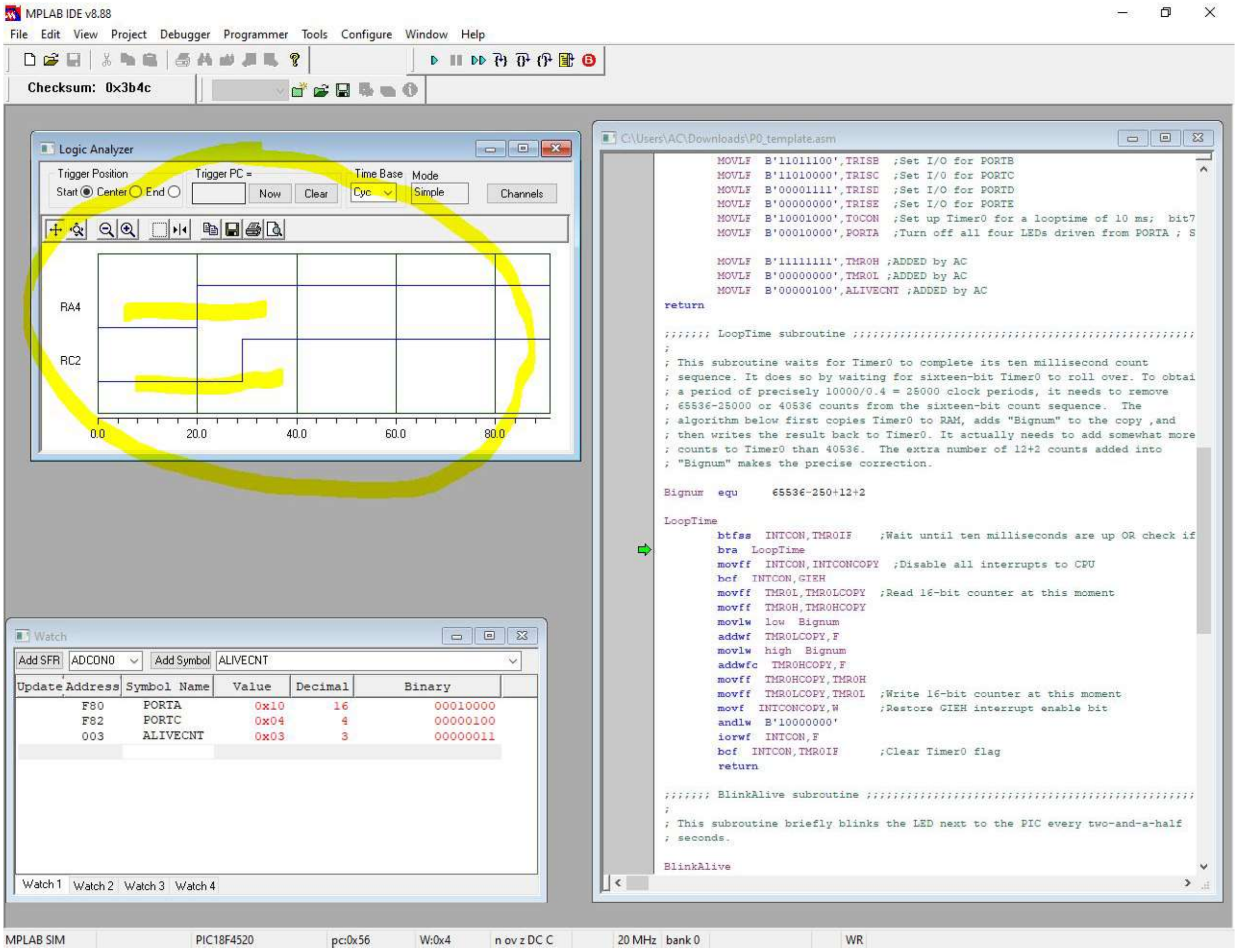
1. Click on **View** >> **Simulator Logic Analyzer.** The *Logic Analyzer* window will launch and your IDE should look as follows:



2. Click on the ***Channels*** button and the *Configure Channels* window will launch. From the *Available Signals* menu, first select the bit **RA4** and then click on the ***Add*** button. This will move the bit **RA4** to the *Selected Signal(s)* menu on the right. Repeat these last steps in order to add and select the bit RC2. After this, your window should look as follows.



3. Once you have added all the desired signals, click on the ***OK*** button. The selected signals should appear in the *Logic Analyzer* window as follows:



4. Now you can *animate* the code and see the behaviour of the two bits **RA4** and **RC2** with respect to simulation time. Let the animation run for a while and see what happens on the *Logic Analyzer* window.
5. For your convenience, you may terminate the animation after a certain number of simulation cycles and you should see the periodic behaviors of these two bits. After a certain time, you should obtain your Logic Analyzer window should look as follows.
    a. Output a 75% duty cycle pulse train at bit **RA4**.
    b. Output a 50% duty cycle pulse train at bit **RC2**.