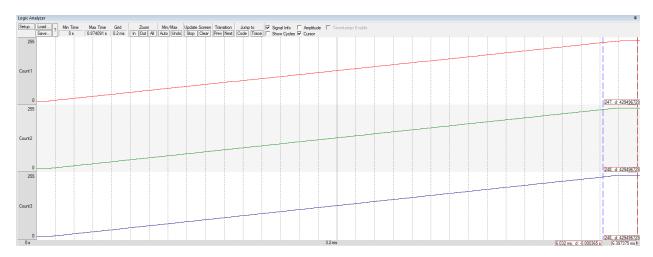
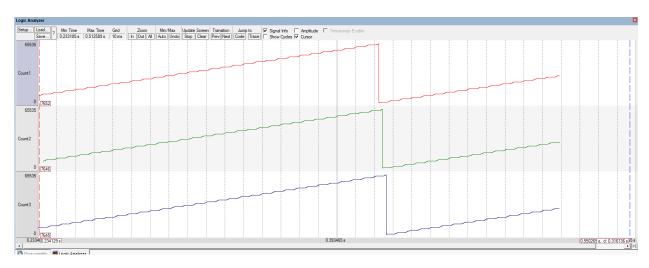
## Problem 1



2ms -> 79, 4ms -> 163, 6ms -> 245

## Problem 2



2ms -> 806, 4ms -> 2,629, 6ms -> 4,317

## **Problem 3**

The cooperative scheduler is not efficient due to excessive context switching overhead. By calling OS\_Suspend after every single increment, each thread voluntarily gives up its CPU time after minimal work, forcing unnecessary context switches. The preemptive scheduler allows threads to run for their entire time slice (2ms), performing many increments before switching. This is demonstrated by the ~91% decrease in performance with cooperative scheduling (80 increments vs 900 increments), showing that cooperative threads spend most of their time context switching rather than doing useful work.