COMP 4958: Lab 7

1. Consider 3 goroutines, one keeps printing P's, another keeps printing Q's & the third keeps printing R's. We would like to coordinate the printing so that the number of R's printed is always less than or equal to the total number of P's and Q's printed. Implement the necessary synchronization in Go in 2 different ways:

   (a) using Go mutexes & condition variables

   (b) using Go weighted semaphores

   Your solutions should provide maximal concurrency. Be sure to comment your code.

2. Consider again the program with 3 goroutines, one printing P's, another printing Q's & the third printing R's. This time, use Go weighted semaphores to synchronize the 3 routines so that at any time

   number of P's printed $\leq$ number of Q's printed $\leq$ number of R's printed

   Your solution should provide maximal concurrency. Be sure to comment your code.