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CIS*3110 – Assignment 4

Q1) No, the output of the program can not be predicted before its execution as it varies. This is supported by the output of multiple executions shown in the attached a4_badoutput.txt file.

Q3) No, the modified program can not become deadlocked. Deadlock is when two threads are waiting for each other to access the resource or increment the counter in this case, but neither does. This scenario is often easily seen by creating a resource allocation graph and looking for cycles. Figure 1 outlines the resource allocation graph for the modified program. As it is seen, no cycles are created in the graph, therefore deadlock is not possible.

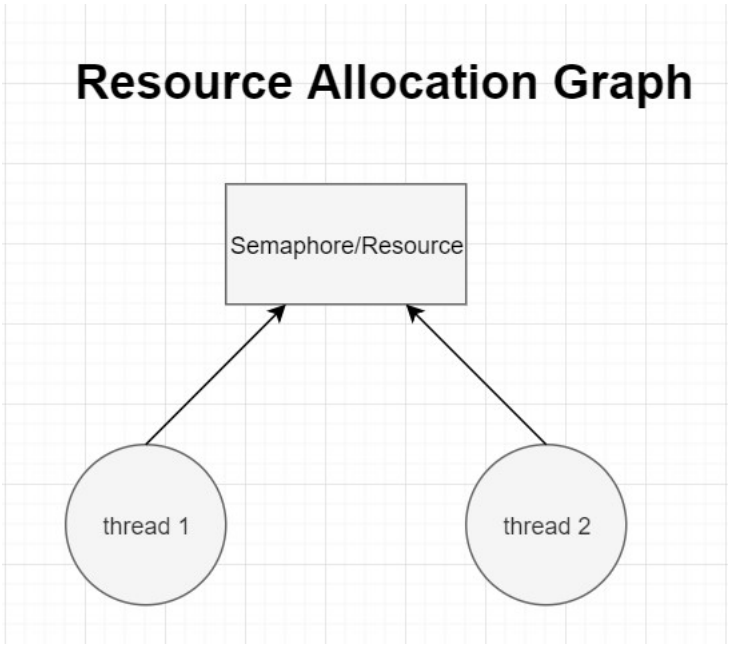

Figure 1: Resource allocation graph for modified program igoodcnt.c