SYSC 4001 Assignment 3 Part 2 Report

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In part C of question 2, we can identify no instances of deadlock or livelock occurring. As such, here is the execution order for the processes. We will denote the 2 TAs created by the parent process as TA 1 and TA 2.

TA 1 is instantiated first and thus gets access to the questions first. It first locks the rubric and chooses whether to edit the questions. Then, it releases the rubric. It then proceeds to select the first question from the first student and locks it. While this happens, TA 2 locks the rubric, decides whether to change a question, and then unlocks it. TA 1 and TA 2 then grade all the questions for the first student as follows:

- The TA checks to see if the questions it is attempting to grade is locked.
- If it isn't, it locks the question, grades it, then unlocks it.
- If it is, it checks the next question and locks, grades, and unlocks it.
- Then, the TA tries the next ungraded question until all of the first student's questions are graded.

This goes on for all students until student 9999 is reached.