threadPool.pdf
3BB4 Assignment 2
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b)
i)
An invariant in my model is number of worker threads, which is always 4.

ii)

Yes a deadlock can occur under the condition that the threads have no pre-emption. For example, a user requests the last thread in the pool and all users with a thread voluntarily holds onto them, so an additional user will indefinitely wait for it to return to the pool. To change the implementation to make sure it is deadlock free, the process that acquires the thread resources, must automatically return them to the pool once their jobs are done.