General comments

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In our case: *"determine which invariant preservation proofs (if any) would have failed"*. A (hard to follow) proof that does not mention what is being attempted and whether the proof is or not successful is difficult to understand and, therefore, evaluate. Formally it could be an F (or zero, in numeric terms), as the question asked has not been answered!

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If you write by hand, please be **extra clear** and careful.

Strike-through, bent, slanted, uneven lines: simply more difficult to understand.

Do not squeeze words, symbols, in a small space.

Send documents easily readable on a screen (e.g., avoid dark backgrounds, photographs of wrinkled papers, . . .).

Proofs

All the proofs we have been doing have the form of sequents.

$Hypotheses \vdash Goal$ is the standard form for a sequent.

That is what we have been using so far.

Other forms of proofs not admissible. The assignment was explicit about this, I sent a reminder, and clarified it in the classroom.

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Sequents make the scenario (*Hypotheses*) and the objective (*Goal*) clear and non-ambiguous.

Some of you sent proofs not adhering to this standard. Most of them are very unclear as what you are starting with, what you are trying to prove, and what are the steps are very confusing!

At this stage we do **not** work with the code / model. All relevant information is in the sequent.

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We are not looking for an execution that violates the invariant, but which proofs of the invariant fail.

You can have an invariant that passes invariant preservation, but which would be false after an "execution" step.

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Sound processes make it possible to always obtain correct results.