Coursework - Frequently Asked Questions

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Abstract. I have been asked a variety of questions over the duration of your coursework. The answers are in here.

Do I have to use Ada-SPARK?

Yes. The assessment is on Ada-SPARK, and getting you to develop a safety-critical system. Other languages do not have the ability to demonstrate safety, and hence are inappropriate.

Can I put extra information in appendices?

No. The page limit is 10 pages, in part because one of the goals of the assessment is to get you to write clearly and succinctly.

I have idea X for an extension. Would that be suitable?

Extensions to the given scenario are encouraged. I also do not want to overspecify what extensions are. Ask yourself this question to help gauge what would get you the most marks:

- *Is this fundamentally new to the model, or is it just more of the same?* In other words, if your extension was adding another sensor (for rogue pegasus, for example) then this is effectively the same as any other sensor. It would still get you marks, but would not guarantee getting all of those marks.

Which proof obligation should I show in full?

You need to show one proof obligation in full (i.e. a proper proof of its consistency, like we did in the lectures). Some proof obligations are harder than others to prove, and some proof obligations are more important than others. (Strictly speaking, all inconsistent procedures are equally important, since they would render the whole development inconsistent. However, by important I mean "for an obviously life-dependent system".) Choosing a trivial, low-level proof obligation would be easy to do and not take up much space. It may not get you all of the marks available. By contrast, picking a complex, high-level proof obligation would be difficult, and would take up a lot of space, but it would gain higher marks. You have to make that decision about what to include for the probable pay-off.

How long should the Abstract be?

Somewhere in the region of 7-12 lines. Anything outside that range would look a bit odd.

Do I have to include code, or can I include GNAT screenshots?

You should not include code in your report. You are more than welcome, indeed encouraged, to show your working code in your demonstration video.