Software Engineering

CSE470

Homework 1

Fall 2001

Due: 8/31/2001

1. After reading the articles “An Investigation of the Therac-25 Accidents” by Nancy G. Leveson and Clark S. Turner in *IEEE Computer*, July 1993, “Ariane 5 Flight 501 Failure”, the final report from the ESA inquiry board, and Chapter 1 from the Ghezzi book, submit a two-page critique that addresses the following questions. Be sure to include examples from the article or text, as well as your own experiences or sources.

   - In general, how did software engineering (if any) affect both incidents?
   - What process changes might have changed the outcomes?
   - Who/what was responsible for the incidents? (Explain)
   - How did the properties of the hardware that the software was to control play into the accidents?
   - What role did the interaction between management and technical staff have on the accidents?
   - Should we require software engineers to be certified? If we were to certify software engineers, what criteria should be used for certification?