

Software engineering academics said for years that a significant percentage of large software projects failed. In the run-up to Y2K, most of the world's large companies claimed that fixing the millennium bug was a large project whose success was critical to their survival. One would therefore expect many large companies to have failed, but none did. Who was mistaken? Justify your answer. (20 marks)

### Model answer

In many companies, the Y2K frenzy provided an excuse to undertake other projects, and when a proportion of these duly failed they would have been described otherwise than as the 'millennium bug'. However, this doesn't explain the complete absence of failures. Even if 90% of corporate IS departments had cynically used Y2K to fund other projects in the absence of real risk to themselves, we might have expected 3% of large firms to fail rather than the 30% suggested by software engineering theory. The most convincing explanation is that the Y2K bug did not involve any requirements engineering or specification activity, which is where the majority of large project failures have

their origin. (See, for example, the paper by Curtis, Krasner and Iscoe).

The task facing the programmers doing Y2K remediation was: 'See to it that this system keeps on working in the year 2000, exactly as it works today'. The specification is unchanged; changes to the test data, to allow regression testing, are almost trivial.

In fact, the main lesson to be learned from the non-events of Y2K is that if anything the role of requirements engineering and specification in large project failure has if anything been under-estimated.