

1993 Paper 4 Question 6

UNIX Case Study

Show how race conditions can arise:

(a) among processes over access to shared data [4 marks]

(b) between processes and interrupt-driven routines [4 marks]

Discuss why the UNIX kernel cannot be run on a shared-memory multiprocessor. [7 marks]

Outline how the UNIX kernel could be modified to run on a shared-memory multiprocessor. [3 marks]

Describe briefly an alternative approach. [2 marks]