Institut for Matematik og Datalogi
Syddansk Universitet

April 7, 2005
JFB

On-Line Algorithms – F05 – Lecture 9

Lecture, April 5

We covered sections 3 and 6 (though didn't get to the separation for PERM and LRU), plus the definitions for relatedness and weakly comparable in section 2 of "The relative worst order ratio applied to paging".

Lecture, April 12

We will finish section 6 and cover section 7 of "The relative worst order ratio applied to paging", and then chapter 7 in the textbook quickly. We will begin on chapter 8, probably getting up to the statement of von Neumann's Theorem.

Lecture, April 19

We will finish chapter 8 and begin on chapter 9 in the textbook.

Problems for April 18

1. Show that RAND and LRU are incomparable using the relative worst order ratio. (Hint: consider the sequence in Theorem 4.2 and the cyclic repetition of $k+1$ pages.)

2. How do RAND and MARK compare?

3. Do Exercise 7.3. See page 122 for the coupon collector's problem. Assume that there are $k+1$ pages in all. My calculations give $(1+k)(H_k-1)$, instead of the value in the textbook.