CSIS 3502 Operating Systems Fall 2017

Assignment No. 5

Study of static page replacement in Virtual Memory Management. Observation of general behavior of a system with page replacement. Computation of some relevant performance metrics.

The simulation models for this assignment are implemented in the source files :

"fifopgrep.cpp", "lrupgrep.cpp", and "optpgrep.cpp".

These models apply the FIFO, LRU, and Optimal page replacement techniques techniques.

* Copy the source files from the system directory on CS3 (follow instructions on the Web), then compile, and link.
* Run the programs.
* Run the simulation models.
* Change the average and standard deviation for the normal distribution, and compare results.
* Write a report describing the characteristics of the page replacement techniques modeled.
* What changes in the results do you notice?
* What other performance measures can this model compute?

Questions:

1. What aspect of an operating system is the model representing?
2. What performance measures does the model compute?
3. What is noticeable in the dynamic behavior shown in the model?

Use the usual guidelines for structuring the report.