Project: Page Replacement Algorithms

Protocol for Project Submission and Testing

Documentation

- Submit your source code to the appropriate bin on IVLE by the due date
- The code you submit must be *exactly* the code you use for your testing. If you need to make any changes after submission then inform the lab assistant prior to testing.
- No other documentation is necessary.

Testing

- You need to see the lab assistant during the first lab session after the project is due (see course page for dates).
- You should bring your own laptop for the test. If you do not have a laptop or prefer not to use it, then you can run your program on one of the lab computers.
- Your program must be able to read text files (.txt extension, similar to the one posted on the web) from a USB memory stick, and write text files (similar to the one posted on the web) to the same memory stick.
- Your program should perform the following steps:
    - Read the file input.txt from the memory stick that will be given to you. This will contain a series of n integer pairs of the form ar_i t_i all separated by blanks; ar_i represents the arrival time of process i and t_i represents its total service time.
    - Starting with the FIFO scheduling algorithm, determine the real time of each process and the average turnaround time of all processes under the algorithm and output the results into a file nnn.txt, where nnn is your matriculation number.
    - Repeat the above steps for each the other scheduling algorithms, SJF, SRT, and MLF, and output the results as separate lines of the same file nnn.txt.
    - Hence the output file should contain four separate lines, one for each scheduling algorithm. Each line should have the form

      $$T\ r_1\ r_2\ \ldots\ r_n$$

      where T is average turnaround time, and each r_i is the real time of process i.
    - Write the output file to the same USB memory stick. To facilitate grading, do not output any additional information.
- You only get one chance to run the test, except when there is some minor problem that results in a catastrophic failure and can be fixed on the spot, e.g., the program crashes and produces no results.
- We will evaluate the output of your program (not during the demo session) and report the results to you. You can approach the lab assistant after the results have been posted to see the errors you have made.
- I suggest that you test the protocol before coming to the demo session to avoid unnecessary delays/problems:

- copy the sample input file from the web page onto a memory stick
- run the above protocol
- check your memory stick to make sure it contains a file nnn.txt that matches the output file on the web page