Phillip Stewart

Design document

Procedural program, simulator ruitine and main routine...

Processes represented by struct, easily realized as linked list:
struct process_info:
- -process id #
- -arrival time
- -lifetime
- -start time
- -memory required
- -pointer to next struct

Need generator function for easy creation of structs.

Function to scan file:
- read first line, n = num_processes
- for n:
  - read info from file
  - create node and insert to linked list

Functions to write 'input queue'/'mem map' to file

Run_Simulator:
- init array for pages[max # of pages] # = mem size / page size
- init array for input queue[max # of processes]
- set time = 0
- for t < 100000:
  - for each process:
    - if time == start+life:
      - remove from mem pages
  - for each process:
    - if time == arrive:
      - add to input queue
      - write input queue
  - if process arrived or completed,
    - for processes in input queue, if they fit in memory:
      - add to mem pages (set start time)
- write average time to file.

Main:
- ask user for sizes
- read input file
- run simulation