Team Bash-mohandes

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Data Structure used:

1- Normal array for SRTN and HPF algorithms
2- Circular queue for RR algorithm
3- Binary tree for memory

Code explanation:

RR algorithm: loop and check if there is ant coming process if there is one or more their will be put in ready queue ,after that check for termination if any process has been terminated should stop the quantum and start new one for next process, if no termination but quantum has ended should start new one with the next process and enqueue our process again in the circular queue if not one of these cases loop just loop at same case , in all cases scheduler sleeps 50000 us.

SRTN algorithm: Check for any new arrived processes to add in the processes list. Next, check for a termination message from the process if it has finished its running time. If yes, handle its termination and schedule a new process that has the shortest remaining time. If not, check if there exists a

process with a shorter remaining time, which then would preempt the current process. Run the scheduled process. The scheduler finally sleeps for 50 ms and loops again.

HPF algorithm:
Loop and check if process generator send a process by message queue then loop on my process list (PCB list) and get the one with lowest priority number (higher one) then continue till termination and we also check every clk if process generator send a process.

ProcessGenerator:
Read the input file then create a msg queue to communicate with the scheduler then start to fork the scheduler and the clk and init the memory then start send the arriving processes and handle memory allocation and deallocation.

Assumptions:

No special assumptions

Work load:

member	missions
Mohamed sameh	Process generator in/out files memory
Saif	Process file SRTN algorithm integration
Youssef adel	HPF algorithm memory
Mohamed Emad	RR algorithm testing

Table for time taken for tasks

Task	Time
RR algorithm coding	2 hours
RR algorithm testing and debugging	5 hours
Handling sigCont in process	2 hours
SRTN algorithm coding / debugging	4 hours
Process file	1.5 hours
Integration	2.5 hours
Debugging	24 hours
Process generator	5 hours
Memory manager	5 hours
HPF algorithm	5 hours