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CS4348 Project 3 summary

Implementation

Initially, I was consider using List of lists to save different objects, however I later on find out that it is easier to write objects as a separate class. Which changed my method of implementing them all the similar compare to FCFS. All the scheduler should have empty schedule handler with *Null* printed to indicate no process processing. This project is developed in a long period of time which could cause a lot of unnecessary memory usage. In addition, the memory usage in the project could be minimized if different variable. This project is implemented in Java, and there are a total of two classes, all in schedule.java.

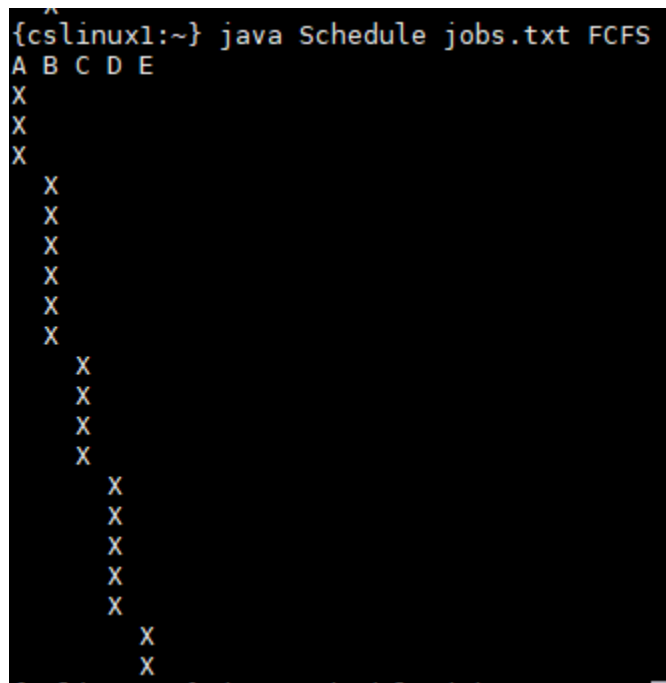
All the methods are independently implemented from the class slide. Below I have attached the results from the provided txt file. The results are also ensured from slide.

Learned

It would be easier to implement if more output can be provided, which the idel CPU situation is also provided. Below are the end results. ALL command is not provide since it's the same results of FCFS, RR, SPN, SRT, HRRN, and FB.

Screenshot

First-Come-First-Serve



Round-Robin

```
[cslinux1:~} java Schedule jobs.txt RR  
A B C D E
```

The Gantt chart illustrates the execution of five processes (A, B, C, D, E) under Round Robin scheduling with a time quantum of 1 unit. The horizontal axis represents time from 0 to 16 units. Each process's execution is shown as a segment of its corresponding color. Process A (red) runs at [0,1], [2,3], [4,5], [8,9], and [10,11]. Process B (green) runs at [1,2], [3,4], [5,6], [7,8], [9,10], and [11,12]. Process C (blue) runs at [2,3], [4,5], [6,7], [8,9], [10,11], and [12,13]. Process D (orange) runs at [3,4], [5,6], [7,8], [9,10], [11,12], and [13,14]. Process E (purple) runs at [4,5], [6,7], [8,9], [10,11], [12,13], and [14,15]. All processes complete their execution by time 16.

Shortest Process Next

```
{cslinux1:~} java Schedule jobs.txt SPN
```

A	B	C	D	E
X				
X				
X				
	X			
	X			
	X			
	X			
	X			
	X			
			X	
			X	
	X			
	X			
	X			
	X			
		X		
		X		
		X		
		X		
			X	
			X	
			X	
			X	
			X	

```
{cslinux1:~} java Schedule jobs.txt SRT  
A B C D E  
X  
X  
X  
X  
X  
  
X  
  
X  
X  
X  
X  
X  
  
X  
  
X  
X  
X  
X  
X  
X
```

```
{cslinux1:~} java Schedule jobs.txt HRRN  
A B C D E  
X  
X  
X  
X  
  
    X  
    X  
    X  
    X  
    X  
    X  
    X  
  
        X  
        X  
        X  
        X  
  
            X  
            X  
  
                X  
                X  
                X  
                X  
                X
```

FeedBack

```
{cslinux1:~} java Schedule jobs.txt FB
A B C D E
X
X
  X
X
    X
  X
    X
      X
    X
      X
X
  X
    X
X
  X
    X
X
  X
X
```