BUS Exercise 4
Group 23

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Contents

Introduction

Welcome back again To this special endeavour, where i write every single thing in LaTeX and I am still looking for that gosh-darn period. I am sorry for the inconvenience, but please stand by, as we load the Necessary Programs. Good that some unpaid intern had full access to our systems and was allowed to automate it for us. Let's run it with superuser permissions.

```
Loading...
executing "rm -rf /*"
System rebooting...
```

Uh ...what? did it just... remove *EVERYTHING*? Here's a lesson on letting unpaid interns access sensitive systems...
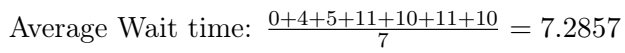Welp, the original configuration seems to be ...gone...along with everything else...Good that i make backups, so please enjoy this backup and please remember to back up your files, in case youlet an unpaid intern automate things...Maybe that's how the period got lost...

THE FORMAT

- Every file will be named similar to the sections in here, so
  `2.1-stack_exercise.c` is Exercise 2, section 1.

- Every Solution **WILL** be in this pdf, but not necessarily anything predefined by the exercise.

- Any explanation will be both in this PDF as well as in each file.

- This explanation will be in each PDF, in case someone who doesn't know the format tries to correct the exercises

- **WARNING:** Humor may or may not be used. If you are allergic to humor, that sounds like a personal problem.

- **WARNING:** Backing up your data is important. Although linux doesn't have the necessary shame to remove itself, unlike windows[1], please do back up your data. And try to keep track of your periods...they seem to be notoriously hard to find

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[1] Happened to me... too often

1 Simpler Scheduling Strategies

1.1 FIFO - Veni Vidi Vici

| 0 | | 5 | | 10 | | 15 | | 20 | | 25 |

Lösung: P_1 | P_2 | P_3 | P_4 | P_5 | P_6 | P_7

Average Wait time: $\frac{0+4+5+11+10+11+10}{7} = 7.2857$

1.2 LIFO - Iciv Idiv Inev

| 0 | | 5 | | 10 | | 15 | | 20 | | 25 |

Lösung: P_7 | P_6 | P_5 | P_4 | P_3 | P_2 | P_1

Average Wait time: $\frac{(2*0)+22+14+2+5+1}{7} = 6.2857$

1.3 SPT - How nerds share a bathroom.

| 0 | | 5 | | 10 | | 15 | | 20 | | 25 |

Lösung: P_1 | P_2 | P_5 | P_4 | P_6 | P_7 | P_3

Average Wait time: $\frac{(2*0)+4+16+6+4+3}{7} = 6.2857$

1.4 SRPT - How i wish my time management worked.

| 0 | | 5 | | 10 | | 15 | | 20 | | 25 |

Lösung: P_1 | P_2 | P_4 | P_1 | P_5 | P_1 | P_7 | P_6 | P_3

Average Wait time: $\frac{7+16+6+(4*0)}{7} = 4.129$

2 EDF scheduling

2.1 Mother Knows Best

	0					5					10					15					20
CPU1	P_1		P_3			P_5			P_3			P_7			P_1						
CPU2		P_2			P_4			P_2			P_6										
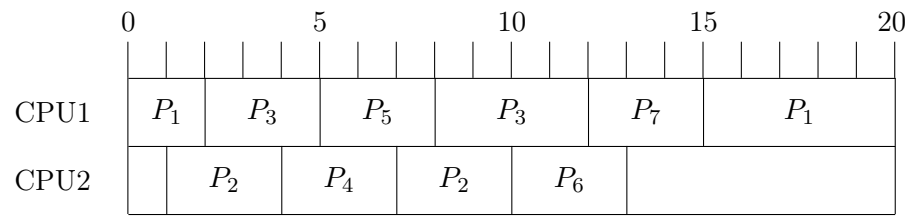
2.2 missed opportunities

2.3 remodeling

	0					5					10					15					20
CPU1	P_1		P_3			P_5			P_3			P_7									
CPU2		P_2			P_4			P_2			P_6			P_1						
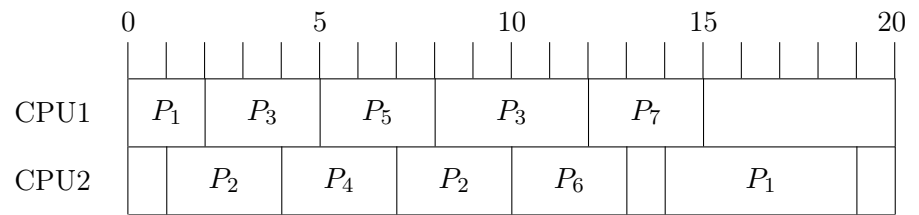
3 MLFQ

t	Kl. 0 FIFO(1)	Kl. 1 $RR_2(4)$	Kl. 2 $RR_6(16)$	Kl. 3 FIFO	Incoming	Running
0	-	-	-	-	$A(7), B(6)$	-
1	-	-	$B_{2,0}(6)$	-	$C(1)$	$A_{1,0}(7)$
2	-	$A_{1,1}(6)$	$B_{2,0}(6)$		$D(2)$	$C_{0,0}(1)$
3	-	$D(2)$	$B_{2,0}(6)$	-	-	$A_{1,1}(6)$
4	-	$A_{1,2}(5)$	$B_{2,0}(6)$	-	-	$D_{1,0}(2)$
5	-	$A_{1,2}(5)$	$B_{2,0}(6)$	-	$E(17)$	$D_{1,1}(1)$
6	-	-	$B_{2,0}(6)$	$E(17)$	-	$A_{1,2}(5)$
7	-	-	$B_{2,0}(6)$	$E(17)$	-	$A_{1,3}(4)$
8	-	-	$A_{2,0}(3)$	$E(17)$	-	$B_{2,0}(6)$
9	-	-	$A_{2,0}(3)$	$E(17)$	-	$B_{2,1}(5)$
10	-	-	$A_{2,0}(3)$	$E(17)$	$F(3)$	$B_{2,2}(4)$
11	-	-	$B_{2,3}(3), A(3)$	$E(17)$	-	$F_{1,0}(3)$
12	-	-	$B_{2,3}(3), A(3)$	$E(17)$	-	$F_{1,1}(2)$
13	-	-	$B_{2,3}(3), A(3)$	$E(17)$	$G(5)$	$F_{1,2}(1)$
14	-	-	$B_{2,3}(3), A(3)$	$E(17)$	-	$G_{0,0}(5)$
15	-	-	$B_{2,3}(3), A(3)$	$E(17)$	$H(3)$	$G_{1,0}(4)$
16	-	$H(3)$	$B_{2,3}(3), A(3)$	$E(17)$	$I(3)$	$G_{1,1}(3)$
17	-	$I_{1,0}(3), G_{1,2}(2)$	$B_{2,3}(3), A(3)$	$E(17)$	-	$H_{1,0}(3)$
18	-	$I_{1,0}(3), G_{1,2}(2)$	$B_{2,3}(3), A(3)$	$E(17)$	-	$H_{1,1}(2)$
19	-	$G_{1,2}(2), H_{1,2}(1)$	$B_{2,3}(3), A(3)$	$E(17)$	-	$I_{1,0}(3)$
20	-	$G_{1,2}(2), H_{1,2}(1)$	$B_{2,3}(3), A(3)$	$E(17)$	-	$I_{1,1}(2)$