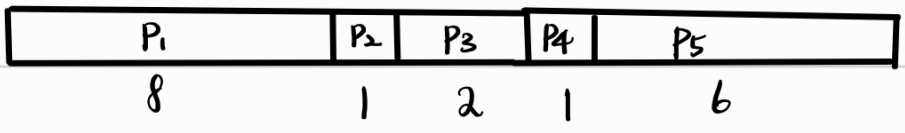
Operating System HW3 B10304009 尹信享

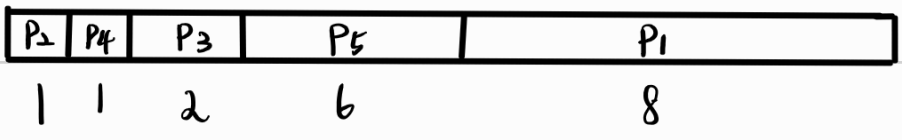
1. Memory-mapped I/O: Put the I/O registers in the regular memory space so that they can be accessed just as any other memory locations.

2. Most I/O require the transfer of bytes between the I/O device and consecutive memory locations over and over again. DMA allows this transfer to be done by a special chip, therefore let the CPU do other tasks.

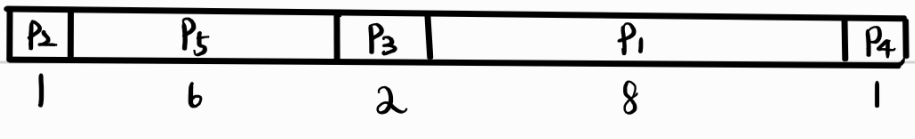
3. (a) FCFS :



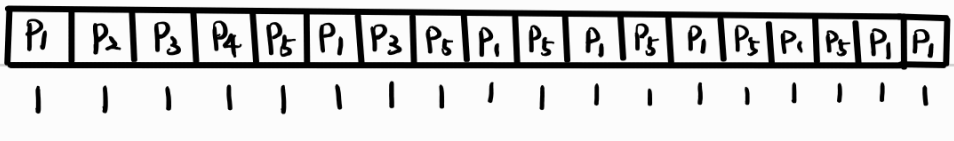
SJF :



Non-preemptive priority :



RR :



(b)

Turnaround time	P_1	P_2	P_3	P_4	P_5
FCFS	8	9	11	12	18
SJF	18	1	4	2	10
non-preemptive priority	17	1	9	18	7
RR	18	2	7	4	16

(c)

Waiting time	P_1	P_2	P_3	P_4	P_5	Avg.
FCFS	0	8	9	11	12	8
SJF	10	0	2	1	4	$^{17}/_{5}$
non-preemptive priority	9	0	7	17	1	$^{34}/_{5}$
RR	10	1	5	3	10	$^{29}/_{5}$

(d) SJF scheduling

4. I feel like "subroutine" is the apt term to use here rather than "coroutine", which is a more general term to use.
Every time the user part invokes the kernel part, the kernel will start out in the same place. This behavior is similar to a procedure (subroutine).