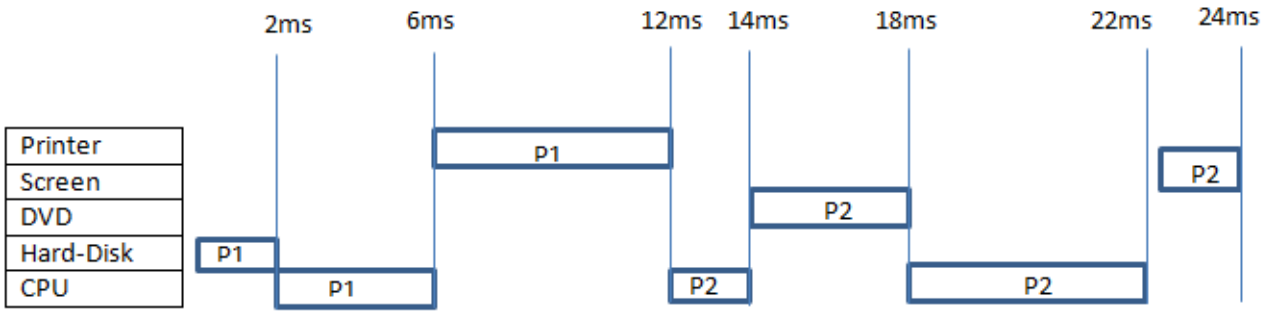
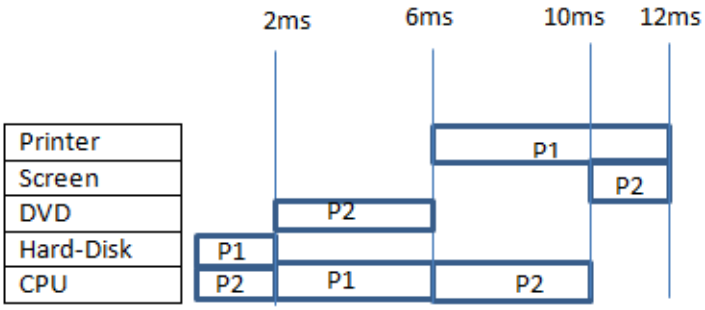
1 Operating system: Monotasting and Multitasting

Two processes need to use some resources like a hard-disk, CPU, printer, DVD and screen. But they need to finish the function with one resource before this process is able to use the next resource. For instance, with Process 1, it needs to finish the time using a hard-disk before starting to use CPU. The following pictures show how both programs would run in a monotask system:

	Hard-disk	CPU	Printer	DVD	CPU	Screen
P1	2ms	4ms	6ms			
P2		2ms		4ms	4ms	2ms



As it is seen, the operating system is able to run one process each time. So, the total time to run both processes is 24 ms. If the processes are running in a multitasting system, the following picture shows the results:



As the picture shows, the processes are run in half the time if the result is compared with the monotasting system.

Exercise

Do the graph for a multitasting system for the next processes:

	Keyboard	CPU	Screen	mouse	CPU	Screen
P1	2ms	2ms	2ms			
P2				1ms	6ms	2ms