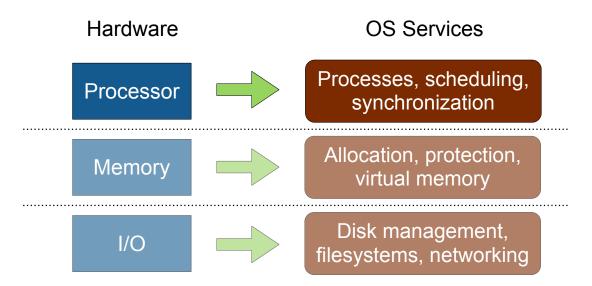
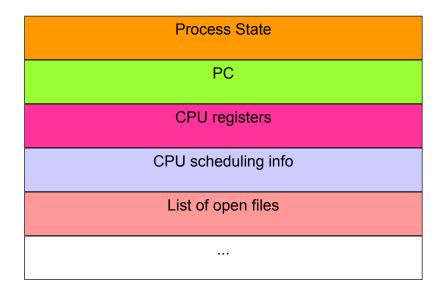
Processes

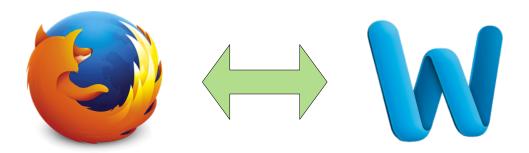


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Process Control Block (PCB)

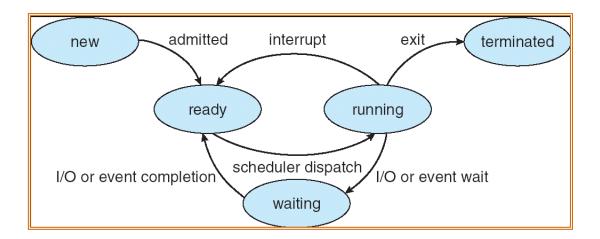


Context Switching

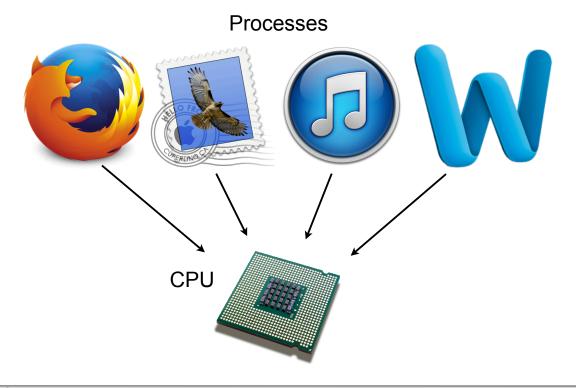


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Process Execution States

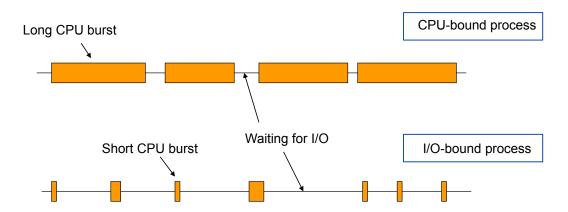


CPU Scheduling



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CPU and I/O Bursts



Multilevel Feedback Queues

	Priority	Time Slice
GFA	1	1
Е	2	2
DB	3	4
\Box	4	8

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CPU Scheduling Summary

First Come First Serve (FCFS)

Shortest Job First (SJF)

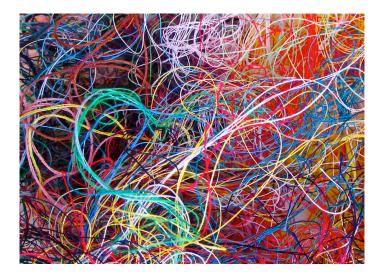
Shortest Remaining Time First (SRTF)

Round-Robin (RR)

Multilevel Feedback Queues (MLFQ)

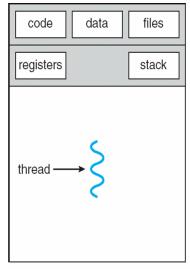
... more advanced schedulers ...

Threads

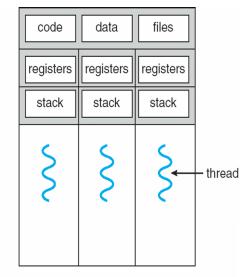


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Multithreaded Processes



single-threaded process



multithreaded process

Thread APIs

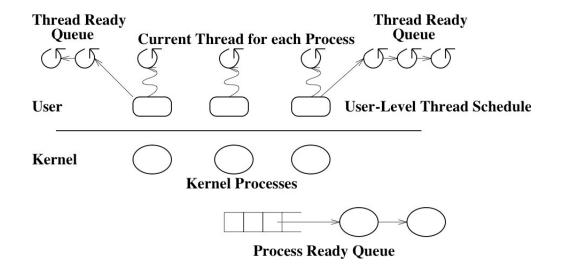
```
POSIX Threads (pthreads):
    pthread_create(&tid, NULL, my_fun, &param); // thread runs my_fun

Windows Threads:
    ThreadHandle = CreateThread(NULL, 0, MyFun, &Param, 0, &ThreadID);

Java Threads:
    Thread t = new Thread(new MyRunnable(param));
    t.start(); // start the thread running MyRunnable.run()
```

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User-Level Threads



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