

Lec03 Week 03 Introduction To System Programming

1. Yes, it is possible to send multiple IRQ requests to a processor or share an IRQ with multiple devices. The requests are handled with priorities and simultaneously in fraction of a second. Most CPUs or processors are multicore and each core working concurrently and simultaneously.
The processor gets its request from a device, sets up the ip and it looks for the address of the irq handler which contains the program coordinated to work toward a certain irq or device. The kernel finds out the address of irq handler and ip changes to irq handler containing the program. The opcode is then fetched by a processor to be executed. Similarly, all the other requests are happening simultaneously and concurrently. The whole process is also known as a program trip.

8. The standard library routines are written in C codes. When a C program containing this library functions which are imported being into the source code by the user, the compiler links the library routines with the corresponding opcode/ machine code instructions which are executed sequentially along with the source code being executed.