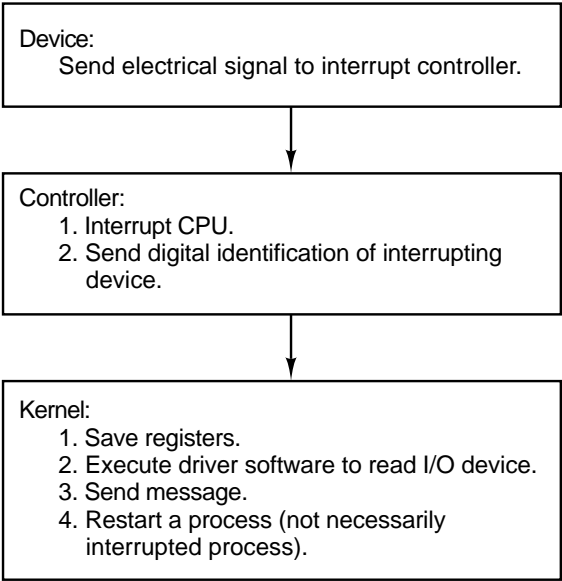


Device:
Send electrical signal to interrupt controller.



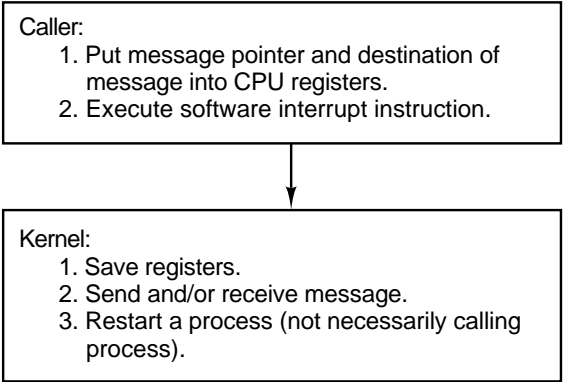
```
graph TD; A["Device:  
Send electrical signal to interrupt controller."] --> B["Controller:  
1. Interrupt CPU.  
2. Send digital identification of interrupting device."]; B --> C["Kernel:  
1. Save registers.  
2. Execute driver software to read I/O device.  
3. Send message.  
4. Restart a process (not necessarily interrupted process)."]
```

Controller:
1. Interrupt CPU.
2. Send digital identification of interrupting device.

Kernel:
1. Save registers.
2. Execute driver software to read I/O device.
3. Send message.
4. Restart a process (not necessarily interrupted process).

(a)

Caller:
1. Put message pointer and destination of message into CPU registers.
2. Execute software interrupt instruction.



```
graph TD; D["Caller:  
1. Put message pointer and destination of message into CPU registers.  
2. Execute software interrupt instruction."] --> E["Kernel:  
1. Save registers.  
2. Send and/or receive message.  
3. Restart a process (not necessarily calling process)."]
```

Kernel:
1. Save registers.
2. Send and/or receive message.
3. Restart a process (not necessarily calling process).

(b)