

# The cost of multi-processing

```
while (1) {  
    int sock = accept();  
    if ((child_pid = fork()) == 0) {  
        // Handle client request  
    } else {  
        // Close socket  
    }  
}
```

Recall our Web Server example  
we need to fork a child process for each request

- Create a new PCB
- Copy the address space and the resources
- Have the OS execute this child process  
(switching process involves remapping the virtual memory)
- Use signals and pipes if the child wants to send information back to the parent process

# A good but costly abstraction

- ✓ Good to avoid processes interfering with each other but ...
  - Creating a process is costly (space and time)
  - Context switching is costly (time)
  - Inter-process communication is costly (time)