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1      .
2      .
3      #include <sys/wait.h> //new include
4
5      static const int MAXPENDING = 5; // Maximum outstanding connection requests
6
7      int main(int argc, char *argv[]) {
8          time_t ticks; //variable to hold date and time data
9          char sendbuffer[BUFSIZE]; // Buffer for sending data to the client
10         unsigned int childProcCount = 0; // Number of child processes
11         .
12         .
13         for (;;) { // Infinite for loop; runs forever
14
15             // Wait for a client to connect
16             int clntSock = accept(servSock, (struct sockaddr *) NULL, NULL);
17             if (clntSock < 0)
18                 DieWithSystemMessage("accept() failed");
19
20             pid_t processID = fork();
21             if (processID < 0)
22                 DieWithSystemMessage("fork() failed");
23             else if (processID == 0)
24             { // If this is the child process
25
26                 close(servSock); // Child closes parent socket
27
28                 // clntSock is connected to a client!
29                 snprintf(sendbuffer, sizeof(sendbuffer), "%.24s\r\n", ctime(&ticks)); //Create data and time string in outgoing buffer
30                 ssize_t numBytesSent = send(clntSock, sendbuffer, strlen(sendbuffer), 0); //Send date and time string to the client
31                 if (numBytesSent < 0)
32                     DieWithSystemMessage("send() failed");
33
34                 exit(0); // Child process terminates
35             } // end child process code
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42
43
44     printf("with child process: %d\n", processID);
45     close(clntSock); // Parent closes child socket descriptor
46     childProcCount++; // Increment number of child processes
47
48     while (childProcCount)
49     { // Clean up all zombies
50         processID = waitpid((pid_t) - 1, NULL, WNOHANG); // Non-blocking wait
51         if (processID < 0) // waitpid() error?
52             DieWithSystemMessage("waitpid() failed");
53         else if (processID == 0) // No zombie to wait on
54             break;
55         else
56             childProcCount--; // Cleaned up after a child
57     } //end zombie killing loop
58 } //end infinite for loop
59 // NOT REACHED
60 }
```