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Operating Systems
HW 6

2) 2 points): Answer the following **for part 2**:

- Which of the calls above are blocking and which are not? Explain what that means?
 - Is this a form of direct communications or indirect communications?
 - What is the failure flag returned from connect() that indicates the server is not ready?
 - How would you change your program to communicate between processes in different machines?
- Accept(), connect(), read(), and write() are blocking calls. Socket(), bind() and listen() are *not* blocking calls. When a call is a “blocking call”, it pauses the continuing execution of the program until the call is completed. For example, read() will not allow the program to continue, and will not run unless there is data to be read.
 - This is indirect communications, as the server and client communicate through sockets.
 - If connect() fails it returns -1 and sets errno to an error code, indicating that the server is not ready.
 - If I wanted my program to support communication between different machines, I would need to change the IP address from the local loop_back 127.0.0.1 to whatever the IP address of the other server is, and make sure that both machines are on accessible networks. I would also need to make sure both machines are on the same port.

```
File Edit Selection View Go Run Terminal Help
lab6_1.c - OS - Visual Studio Code
Oct 20 17:23

C: lab5_1.c  C: lab5_1.c  C: lab5_2.c  C: lab6_1.c  X
hw6 > C: lab6_1.c @ main(int, char*)
45 void print_fibonacci(int n, int client_socket) {
53     }
54     printf("%ld\n", value);
55 }
56
57 close(client_socket); // Close the client socket
58 }
59
60 int main(int argc, char *argv[]) {
61     if (argc != 2) {
62         printf("Usage: %s <n>\n", argv[0]);
63         exit(EXIT_FAILURE);
64     }
65
66     int n = atoi(argv[1]);
67     if (n < 2) {
68         printf("n must be greater than 1.\n");
69         exit(EXIT_FAILURE);
70     }
71
72     pid_t pid = fork();
73     if (pid < 0) {
74         perror("Fork failed");
75         exit(EXIT_FAILURE);
76     }
77
78     0
79     1
80     1
81     2
82     3
83     5
84     8
85     13
86     21
87     34
88
89 jefferson@jefferson-VMware-Virtual-Platform:~/Desktop/OS/hw6$
```