

Code C présentés en SYS 1 - Amphi 7 Introduction aux réseaux

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1 Ouverture d'une socket en mode facile

Voir listing 1 et 2.

```
9  int open_listenfd(const char *port); // in csapp.h
10 int accept(int socket, struct sockaddr *restrict addr, socklen_t *restrict addr_len); // in
   ↪ sys/socket.h
11
12 // Opening a server socket
13 int server(const char* port) {
14     int clientfd = -1, listenfd = -1;
15
16     listenfd = open_listenfd(port); // "Open the bar"
17     if (listenfd < 0) {
18         return -1; // Real error handling not shown
19     }
20
21     socklen_t clientlen; struct sockaddr_storage clientaddr; // Enough space for any address
22
23     while ((clientfd = accept(listenfd, &clientaddr, &clientlen)) > 0) {
24         // pointers can also be both NULL
25
26         // Talk with the client using clientfd, a connected TCP socket, using read/write
27         // You could spawn a separate thread
28
29         close(clientfd); // Remember to say goodbye
30     }
31     close(listenfd); // Stop taking new clients.
32
33     return 0;
34 }
```

Listing 1: Ouverture d'une socket serveur

```
36 int open_clientfd(const char *hostname, const char *port); // in csapp.h
37
38 int client(const char* hostname, const char* port) {
39     int clientfd = open_clientfd(hostname, port);
40     if (clientfd < 0) {
41         // Handle errors (-2 get address info error, -1 the socket itself failed)
42         return -1; // Real error handling not shown
43     }
44
45     // talk to the server using clientfd, a now connected socket
46
47     close(clientfd); // Say goodbye
48
49     return 0;
50 }
```

Listing 2: Ouverture d'une socket client