

After pipes we have figured that one can build sockets on top of pipes where sockets are bidirectional.

Like we have `socketpair(2)`, which creates an unnamed pair of connected sockets in the specified domain, of the specified type, and using the optionally specified protocol.

We need to create `socket`, then attach this socket to a host, (i.e., binding), and then listen (in case if it is going to act as a server)

You cannot use any port because only limited ports are allowed for a system being open for the user applications.

Functions like `getsockname`, `gethostname` in various languages can give you back the information for a particular socket

Questions: Does socket act as a blocking or non-blocking?

Socket is just a file descriptor like any other file descriptor

connections are asymmetrical: one process requests a connection, the other process accepts the request

In socket programming:

We use `accept(2)`, `select(2)` functions to listen and then receive the incoming stream. The concept remains the same in every other language.

This whole process of socket connections could be counted in I/O Multiplexing

A snippet to listen/read the data:

```
while ((n = read(fd1, buf, BUFSIZE)) > 0) { if (write(fd2, buf, n) != n) { fprintf(stderr, "write error\n"); exit(1); } }
```

Answer to previous question:-

You can either use blocking mode, or non-blocking mode. You can also use forking a child or using asynchronous I/O `fd`