Corporación Universitaria Empresarial Alexander von Humboldt
VIGILADA MINEDUCACIÓN

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WHY STUDY SOCKETS

Sockets are a mechanism that allows us to establish a link between two programs that run independently of each other.

1. SOCKETS FOR CLIENTS

Data is transmitted across the internet in packets of finite size called ***datagrams***. Each datagram contains a ***header*** and a ***payload***. The ***header*** contains the addres and port to which the packet is going, and various other housekeeping information used to ensure reliable transmision.

2. SOCKET BASIC

A socket Is a connection between two host. It can perform seven basic operations:

- Connect to a remoto machines
- send data
- Receive data
- Close a connection
- bind to a port
- listen for incoming data
- Accept connection from remoto machines on the bound port

3. PUBLIC SOCKET(STRING HOST, INT PORT)

This constructor creates a TCP socket to the specified port on the specified host and attemptsbto Connect to the remoto host

```
try {
  Socket toOReilly = new Socket("www.oreilly.com", 80);
  // send and receive data...
}
catch (UnknownHostException ex) {
  System.err.println(ex);
}
catch (IOException ex) {
  System.err.println(ex);
}
```

4. CLOSING SOCKETS

That's almost everything you need to know about client-side sockets. when you're writing a client application, almost all the work goes into handling the streams and interpreting the data. The sockets themselves are very easy to work with; all the hard parts are hidden.

5. SOCKET EXCEPTIONS

- Most methods of sockets class are declared to throw IOException or its subclass, java.net.SocketExeption
- public class SocketException extends IOException
- However, knowing that a problem ocurred is often not sufficient to deal with the problem.

E. Rusty Harold, Java Network Programming, 3a ed. O'Reilly Media, 2004.