Lecture 2: Network Programming
(aka socket programming)

Layered protocol stack

Application Layer  <---- us today
Transport Layer
Network Layer
Link Layer
Physical Layer
Socket API

socket() - create an empty / anonymous socket
connect() - specify end-point
send()
recv()
shutdown()

bind() - specify listening port and address
listen() - waits for incoming connection
accept() - creates socket connected to client
select() - wait for several sockets

gethostbyname() - resolve host name to IP address
server program structure:

- socket
- bind(address, port)
- listen()  <--- until we get a connection
- client_socket = accept();
- send(client_socket,"Welcome!")
- recv()
- shutdown()