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Networking Using C



Network

- Introduction
- Types of network
- Network Models
 - ◆ OSI Model
 - ◆ TCP/IP Model

Internet

- IP address
- Port
- Socket
- Client Server Model
- Socket Interface

User Datagram Protocol

- socket function
- bind Function
- Socket Structures
- sendto function
- recvfrom function
- close function
- Simple Datagram Example
- Concurrent UDP Servers
 - ◆ UDP Session Example
 - ◆ Broadcasting
 - ◆ UDP Applications

Transmission Control Protocol

- listen function
- accept function
- connect function
- send function
- recv function
- Simple Example
- Concurrent Server
- Passing structures
- Non-blocking I/O
- HTTP Client Example
- TCP Applications
- Performance

Network Functions

- Socket options
- Out of Band Data
- shutdown

- gethostbyname
- getservbyname

Network Tools

- netstat
- tcpdump
- nc

Process

- Foreground and Background

Process

- Getting information on process
- system function
- exec function
- Creating new process
- Exiting from a process
- Terminating a process
- Waiting for the child
- Zombie process
- Light Weight process
- Process Groups
- Creating daemon process

Signals

- Lifecycle of signal
- Waiting for signal
- Sending signals
- Signal Handlers
- Blocking signals
- Catching segmentation fault
- Sending signals with values

Threads

- Creating threads
- Detachable threads
- Sending signals to threads
- Canceling threads
- Synchronized Access to shared

Data

- Deadlocks
- Condition variables
- Thread specific Data
- Threaded Design

A project on Networking using C