



COMPUTER NETWORKS

EXP 1



STUDY OF HEADER FILES WITH RESPECT TO SOCKET PROGRAMMING

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Aim:

Study of header files with respect to socket programming

Description:

- `stdio.h`
 - Prominently referred to as standard input output library
 - It defines three variable types – `size_t` , `FILE` , `fpos_t` and several macros and various functions to perform input and output
- `unistd.h`
 - Provides access to the POSIX OS API
 - Defines miscellaneous symbolic constants and types, and declares miscellaneous functions.
 - Interface defined by `unistd.h` is typically made up of system call wrapper function such as `fork`, `pipe`.
- `String.h`
 - The header defines `size_t` variable, `NULL` macro and various functions for manipulating strings or arrays of characters.
 - Operations such concatenation, tokenization and searching are made easy using this header
- `stdlib.h`
 - It is the standard library with ISO and ANSI standards
 - It defines four variable types, several macros and various functions for performing general functions
- `sys/types.h`
 - It defines a collection of typedef symbols and structures
 - The most commonly used derived type are `clock_t` and `time_t`
- `sys/socket.h`
 - it contains socket definitions
 - the `accept`, `bind`, `connect`, `gethostname`, `getpeername`, `getsockname`, `recvfrom`, and `sendto` socket are most famous structures of this header.
- `netinet/in.h`
 - it contains definitions for the internet protocol family.
 - `Getaddr()`, `getsourcefilter` are some of the famous functions of this header.
- `netdb.h`
 - It contains definitions for network database operations
 - `Gethostbyaddr`, `getprotoent` are some famous structures of this header

- `time.h`
 - It defines four variable types, two macro and various functions for manipulating date and time.
 - `Tm_yday` , `tm_mday` are some famous data types of `time.h`
- `sys/stat.h`
 - It contains constructs that facilitate getting information about files attributes
 - It defines the structure of the data returned by the functions `fstat()`, `lstat()`, and `stat()`
- `sys/ioctl.h`
 - IOCTL is referred to as Input and Output Control.
 - It contains system I/O definitions and structures.
- `pcap.h`
 - It is an application programming interface (API) for capturing network traffic.
 - It provides tools such as network monitors and network intrusion detection.
- `net/if_arp.h`
 - `arp` – address resolution protocol
 - used to dynamically map between internet protocol and ethernet addresses.
- `Errno.h`
 - It defines macros for reporting and retrieving error conditions using the symbol `errno`.
 - It defines macros for reporting and retrieving error conditions using the symbol `errno`. `errno` acts like an integer variable
- `arpa/inet.h`
 - It contains definitions for internet operations
 - `Inet_addr` and `inet_ntoa` are some macros of this header