Ex. No. 1	STUDY OF HEADER FILES WITH RESPECT TO SOCKET PROGRAMMING

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Aim: To study the header files with respect to socket programming.

Header Files:
The Socket Library provides header files that make programming with socket functions possible.

Types of Header files

1. <sys/types.h>
This header file contains all the data-type definitions also allows for the porting of BSD programs. Usually, this header file must be included before other socket header files.

2. <sys/uio.>
This header file describes the ioevc structure. It's a definitions for vector I/O operations.This structure is used by the readv , writev , sendmsg , and recvmsg calls.

3. <netinet/in.h>
This header file contains constants and structures defined by the Internet system.

4. <arpa/nameser.h>
This header file contains definitions that enable applications to communicate with Internet name servers.

5. <netdb.h>
This header file contains data definitions for socket subroutines. Internet addresses and port numbers are stored in network byte order ..etc

6. <resolv.h>
This header file contains global definitions for the resolver.

7. <sys/socket.h>
This header file contains macro definitions related to the creation of sockets. Contains data definitions and socket structures.

8. <sys/socketvar.h>
This header file defines the kernel structure per socket and contains buffer queues.

9. <sys/un.h>
This header file defines structures for the UNIX interprocess communication domain.

10. <sys/ndd_var.h>
This header defines structures for the operating system Network Device Driver (NDD) domain.

11. <sys/atmsock.h>
Contains constants and structures for the Asynchronous Transfer Mode (ATM) protocol in the operating system NDD domain.

12. <errno.h>
This header file contains definitions for the macro identifiers that name system error status conditions.

13. <sys/ioctl.h>
This header file contains definitions for the symbols required by the **ioctl** function, as well as the declaration for ioctl.

14. <fcntl.h>
This header file contains definitions for the constants associated with the **fcntl** function, as well as declarations for UNIX style I/O functions. Failure to include the **<sys/uio.h>** header file before this header file may result in a warning message if **readv** or **writev** is called.

15. <netinet/in_systm.h>
This header file contains definitions to facilitate the porting of low-level network control and query Internetwork Control and Message Protocol (ICMP), and Internetwork Protocol (IP) raw socket type applications. The Internet ping client utility is an example of such a program.

16. <netinet/ip_icmp.h>
This header file contains definitions of constants and structures required for using the ICMP protocol.

17. <netinet/udp.h>
This header file contains definitions of the User Datagram Protocol (UDP) header for UDP datagrams.

18. <arpa/inet.h>
This header file contains declarations for the network address resolution functions.

19. <net/if.h>
This header file contains structures that define the network interface and provide a packet transport mechanism.

20. <netinet/ip.h>
This header file contains definitions of constants and structures required for using the IP protocol.

Result:
Therefore, we have explored and studied the header files with respect to socket programming.