7. closing the connection

The connection can be closed using the close system call

int close(int sd);

Steps for TCP Connection for server

1. Creating a listening socket

int socket(int domain, int type, int protocol);

This system call creates a socket and returns a socket descriptor. The domain field used is **AF_INET**. The socket type is **SOCK_STREAM**. The protocol field is 0. If the system is a failure, a -1 is returned. Header files used are sys/types.h and sys/socket.h.

2. Binding to a local port

int bind(int sd, struct sockaddr * addr, int addrlen);

This call is used to specify for a socket the protocol port number where it will wait for messages. A call to bind is optional on the client side, but required on the server side. The first field is the socket descriptor of the local socket. Second is a pointer to the protocol address structure of this socket. The third is the length in bytes of the structure referenced by **addr**. This system call returns an integer. It is 0 for success and -1 for failure. The header files are s**ys/types.h** and s**ys/socket.h.**

3. Listening on the port

The listen function is used on the server in connection oriented communication to prepare a **socke** to accept messages from clients.

int listen(int fd, int qlen);

fd – file descriptor of a socket that has already been bound
qlen – specifies the maximum number of messages that can wait to be processed by the server while the server is busy servicing another request. Usually it is taken as 5. The header files used are sys/types.h and sys/socket.h. This function returns 0 on success and -1 on failure.