



## Documentazione Programmazione Socket

```
//Structures for handling internet addresses
struct sockaddr_in { // ...
    short sin_family; // e.g. AF_INET, AF_INET6
    unsigned short sin_port; // e.g. htons(3490)
    struct in_addr sin_addr; // see struct in_addr };

struct in_addr{ unsigned long s_addr; //e.g. INADDR_ANY };

//Structure for handling host names
struct hostent{ // ...
    char *h_name; //The real canonical host name.
    int h_addrtype; //The result's address type, e.g. AF_INET
    int length; //The length of the addresses in bytes, which is 4 for IP (version 4) addresses.
    h_addr; //An IP address for this host. };

int socket(int domain, int type, int protocol); //Allocate a socket descriptor

//Accept an incoming connection on a listening socket
int accept(int sockfd, struct sockaddr *addr, socklen_t *addrlen);

//Associate a socket with an IP address and port number
int bind(int sockfd, struct sockaddr *my_addr, socklen_t addrlen);

int connect(int sockfd, const struct sockaddr *addr, socklen_t addrlen); //Connect - initiate a connection on a socket

int close(int sockfd); //Close a socket descriptor

struct hostent *gethostbyname(const char *name); //Get an IP address for a hostname

//Convert multi-byte integer types from host byte order to network byte order
uint32_t htonl(uint32_t hostlong);
uint16_t htons(uint16_t hostshort);
uint32_t ntohl(uint32_t netlong);
uint16_t ntohs(uint16_t netshort);

//Convert IP addresses to human-readable form and back
const char *inet_ntop(int af, const void *src, char *dst, socklen_t size);
int inet_pton(int af, const char *src, void *dst);

int listen(int sockfd, int queuelength); //Tell a socket to listen for incoming connections

ssize_t recv(int sockfd, void *buf, size_t len, int flags); //Receive data on a socket
ssize_t send(int sockfd, const void *buf, size_t len, int flags); //Send data out over a socket

//Receive data on a socket
ssize_t recvfrom(int sockfd, void *buf, size_t len, int flags, struct sockaddr *src_addr, socklen_t *addrlen);
//Send data out over a socket
ssize_t sendto(int sockfd, const void *buf, size_t len, int flags, const struct sockaddr *dest_addr, socklen_t addrlen);

ssize_t read (int fd, void *buf, size_t count); //Read data from a stream socket
ssize_t write (int fd, const void *buf, size_t count); //Write data on a stream socket
```



---

### Utility Functions

`void bzero(void *s, size_t n);` *// Set the first n bytes of the area starting at s to zero*

`void bcopy(const void *src, void *dest, size_t n);` *// Copy n bytes from src to dest.*

`int strcmp(const char *s1, const char *s2);` *// Compare the two strings s1 and s2.*

`int strncmp(const char *s1, const char *s2, size_t n);` *// Compare the first n byte of s1 and s2.*