Week 3 Networks Lab Report

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socket() is a special system call that creates a point for all future connections with clients. If this call was successful, it returns the lowest-numbered file descriptor that is not opened for current process. It is not a blocking call. Otherwise it will return -1. Description of error is set in <*errno.h*> in the integer variable called **errno**.

accept() is a special system call that is calling from server side when the client is trying to connect after **connect()** system call. It returns a file descriptor referring to the created for the connection socket. If no pending connections are present on the queue, and the socket is not marked as nonblocking, accept() blocks the caller until a connection is present. On error, -1 is returned. Description of error is set in <*errno.h*> in the integer variable called **errno**.

select() is a special blocking system call that blocks the server until it is possible to do some I/O with the clients. It returns a number of file descriptors contained in the three returned descriptor sets. In case of error, returns -1. Description of error is set in <*errno.h*> in the integer variable called **errno**.

bind() is a special system call that assigns the address specified by *addr* to the socket referred to by the file descriptor *sockfd*. It tells OS that any data that is coming to *addr* should be sent to this process. This call is used before starting the main server loop. On success, zero is returned. On error, -1 is returned, and **errno** is set appropriately.