Programming Assignment on Socket Programming

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1. Read the document provided for socket programming.
2. Create a day-time client to find out the time from a day-time server.
   Suggested steps:
   1. Intialise Internet Address Structure (port no=13)
   2. Create a socket of *AF_INET* domain, *SOCK_STREAM* type
   3. Initiate a connection to the socket (already running in every m/c)
   4. Read from the socket
   5. Close the socket
   6. Print the time
3. Write a client/server pair using TCP sockets. Client should pass on some message to the server, whereas the server should receive the message from the client and print the message in the screen.
   Suggested steps:
   1. *Server side:*
      1. Intialise Internet Address Structure
      2. Create a socket of *AF_INET* domain, *SOCK_STREAM* type
      3. Bind to the socket
      4. Listen for the incoming connection on the socket created
      5. Accept the new connection from a client
      6. Receive message from client
   2. *Client side:*
      1. Intialise Internet Address Structure
      2. Create a socket of *AF_INET* domain, *SOCK_STREAM* type
      3. Bind to the socket
      4. Initiate a connection to the socket
      5. Send message to the server
      6. Close the socket
4. Now write a client/server program using UDP socket for the above problem.
   Suggested steps:
   1. *Server side:*
      1. Intialise Internet Address Structure
      2. Create a socket of *AF_INET* domain, *SOCK_DATAGRAM* type
      3. Receive a message from the socket
      4. Send a message to a socket
      5. Close the socket

2. *Client side:*

    1. Intialise Internet Address Structure
    2. Create a socket of *AF_INET* domain, *SOCK_DATAGRAM* type
    3. Send a message to the socket
    4. Receive a message from a socket
    5. Close the socket

5. Write a client/server program using UDP socket to get the query answered by the server. In specific, write a directory service using UDP socket. Client should send the names/telephone numbers to the server, and the server should search the database and reply to the client with the respective number/name.