

## Socket Programming - DNS

In this lab, you will have to write a code that performs DNS operation. You will be provided with the skeleton code (mostly containing comments). Do not change the code including the name of the code file, except for adding your own code.

Your program should take the fully qualified hostname of a host as a command line argument and print a list of corresponding IP addresses, in dotted decimal notation, one on each line. Your program must not crash if a bogus hostname is provided. Well, it should not crash in any case. To see what you should expect from your code, simply type `nslookup <hostname>` on your command prompt. Observe the output of `nslookup` using following hostnames:

[www.usc.edu](http://www.usc.edu), [www.cmu.edu](http://www.cmu.edu), [www.mit.edu](http://www.mit.edu), [www.yahoo.com](http://www.yahoo.com), [www.uet.edu.pk](http://www.uet.edu.pk)

Verify that `mydns.cc` is also giving you similar IP addresses for above hostnames (displaying only IP addresses is fine). For this part, you will be using the function `gethostbyname()` which makes your life much easier as the DNS implementer. You do not need to worry about creating UDP sockets and then sending out DNS messages. Similarly, do not worry about NS, CNAME and A type resource records. The function `gethostbyname()` will do it all for you.

All you will need to do is to interpret the values returned by `gethostbyname()` and display them in dotted decimal notation. You will need a couple of standard C and socket API functions to complete this assignment. The skeleton file is in C and does not use any C++ specific operations. But you are free to add extra header files and use C++ functionality.

**Note:** Remember that you are supposed to do all lab assignments, including this one, alone. Absolutely no cooperation is allowed. You must do all thinking, research, and coding by yourself. ***Do not even discuss with anyone how far you are with this assignment!***

**Warning:** Code similarity will be checked using software.