Winsock Exercises 5

myping

E6: myping

- Write a program to test the reachability of an Internet interface identified by an IP address or name. (The basic function of "ping" command)

- Hints: Send an ICMP "echo request" to the destination, an ICMP "echo reply" will be sent back if the destination is reachable. (refer to RFC 792 for more information about ICMP)

1. Create a raw socket： socktype=SOCK_RAW, protocol=IPPROTO_ICMP;
2. Construct an ICMP message;
3. Use "sendto" to send the ICMP message to the remote machine;
4. Use "recvfrom" to receive any response.

E6: myping

Hand in

- myping.cpp
- myping.pdf
  - the functions of your program and how to use them
  - theory and protocols used in your program
  - flow-chart of your program （showing the main APIs）
  - execution of your program (screen shots)
  - thoughts and discussion

Reference

- Install Microsoft Visual Studio Community 2017
  - https://www.visualstudio.com/zh-hans/downloads/

- Getting started with Winsock
  - https://msdn.microsoft.com/en-us/library/ms738545(v=vs.85).aspx

- Winsock reference
  - https://msdn.microsoft.com/en-us/library/ms741416(v=vs.85).aspx