Final Project Report　　103061108 電機系大二 羅允辰

Screenshot of the result:

Function 1: (Design a DNS to find the required ID address)

```
luoyunchendeMacBook-Pro:TCP ramakototatsu$ ./client
What's your requirements? 1.DNS 2.QUERY 3.QUIT :1
Input URL Address www.yahoo.com
address get from domain name : 116.214.12.74

What's your requirements? 1.DNS 2.QUERY 3.QUIT :1
Input URL Address www.google.com
address get from domain name : 216.58.197.100
```

Function 2: (Design a checking system for finding the email address from student ID)

```
luoyunchendeMacBook-Pro:TCP ramakototatsu$ ./client
What's your requirements? 1.DNS 2.QUERY 3.QUIT :2
Input Student ID 5566
Email get from server : only@network.ee.nthu.edu.tw

What's your requirements? 1.DNS 2.QUERY 3.QUIT :2
Input Student ID 9527
Email get from server : jimmy@network.ee.nthu.edu.tw

What's your requirements? 1.DNS 2.QUERY 3.QUIT :2
Input Student ID 27662000
Email get from server : dhc@network.ee.nthu.edu.tw

What's your requirements? 1.DNS 2.QUERY 3.QUIT :2
Input Student ID 103061108
Email get from server : No such student ID
```

Function 3: (Shutdown the client but keep server listening)

```
What's your requirements? 1.DNS 2.QUERY 3.QUIT :1
Input URL Address www.nthu.edu.tw
address get from domain name : 140.114.69.135

What's your requirements? 1.DNS 2.QUERY 3.QUIT :3
luoyunchendeMacBook-Pro:TCP ramakototatsu$
```

Experience:

I think the most difficult part of this project is to fully understand TCP structure between server and client. After understanding the structure, it is easy to know why use this function at this place. However, because we have to let the client and server continuously working, it is necessary for us to find the right place to put the while and if functions. And also it is hard to print data to client from server.