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Computer Networks Lab 5

Program to display Ip Address of a machine:

```cpp
#include<iostream>
#include<stdlib.h>
using namespace std;
int main() {
    system("ipconfig/all");
    return 0;
}
```

```
Ethernet adapter Ethernet:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Killer E2600 Gigabit Ethernet Controller
   Physical Address. . . . . . . . . :
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
```

Program to fetch the "arp" table for a machine and store it in a C++ map:

```cpp
#include <conio.h>
#include <stdlib.h>
#include <iostream>
#include <fstream>
#include <map>
#include <string>
#include <iterator>
using namespace std;
int main()
{
    system("C:\\Windows\\System32\\arp -a> res1.txt");
    ifstream file("res1.txt");
    int j = 0;
    string temp, table;
    string ip = "", mac = "";
    map<string, string> ipToMac;
    while (getline(file, temp))
    {
        j++;
        if (j > 3)
        {
            ip = "";
            mac = "";
            for (int i = 2; i < temp.length(); i++)
            {
                while (temp[i] != ' ')
                {
                    ip += temp[i];
                    i++;
                }
                while (temp[i] == ' ')
                {
                    i++;
                }
                while (temp[i] != ' ')
                {
                    mac += temp[i];
                    i++;
                }
                ipToMac[ip] = mac;
                break;
            }
        }
    }
    map<string, string>::iterator itr;
    for (itr = ipToMac.begin(); itr != ipToMac.end(); itr++)
    {
        cout << itr->first << " " << itr->second << endl;
    }
    return 0;
}
```

```
$ ./a.exe
```

255.255.255.255->ff-ff-ff-ff-ff-ff