

```

1  /*
2  In this program, we are capturing all the packets from Wireshark software.
3  After capturing them we are saving them in a text file
4  and then counting the total number of Ethernet, IP, UDP, TCP protocols from these packets.
5  */
6
7  #include<iostream>
8  #include<fstream>
9  #include<string>
10 using namespace std;
11
12 int main()
13 {
14     long udp, tcp, ip4, ip6, ethernet, extras;
15     udp = tcp = ip4 = ip6 = ethernet = extras = 0;
16
17     ifstream in("log.txt");
18     cout<<"Packets format captured through Wireshark's protocol count : \n\n";
19
20     if(!in) {
21         cout<< "Failed to open log file";
22         return 1;
23     }
24
25     char str[1000];
26
27     while(in)
28     {
29         in.getline(str, 1000);
30         in.getline(str, 1000);
31         in.getline(str, 1000);
32
33         if(in)
34         {
35
36             if(str[48] == '4') //ip4
37             {
38                 ip4++;
39                 if(str[75] == '1' && str[76] == '1')
40                 {
41                     udp++;
42                 }
43                 else if(str[75] == '0' && str[76] == '6')
44                 {
45                     tcp++;
46                 }
47             }
48
49             else if(str[48] == '6') //ip6
50             {
51                 ip6++;
52                 if(str[66] == '1' && str[67] == '1')
53                 {
54                     udp++;
55                 }
56                 else if(str[66] == '0' && str[67] == '6')
57                 {
58                     tcp++;
59                 }
60             }
61
62
63
64             else
65                 extras++;
66             ethernet++;
67         }
68         in.getline(str, 1000);
69     }
70     in.close();
71
72     cout<<"\nEthernet : "<<ethernet<<"\n\tIP : "<<ip4+ip6<<"\n\t\tIPv4 : "<<ip4<<"\n\t\tIPv6
73     : "<<ip6<<"\n\t\tUDP: "<<udp<<"\n\t\tTCP : "<<tcp<<"\n\tExtras : "<<extras<<endl;
74
75     return 0;
76 }

```