NetInfo

Software Documentation

Author: matiwa

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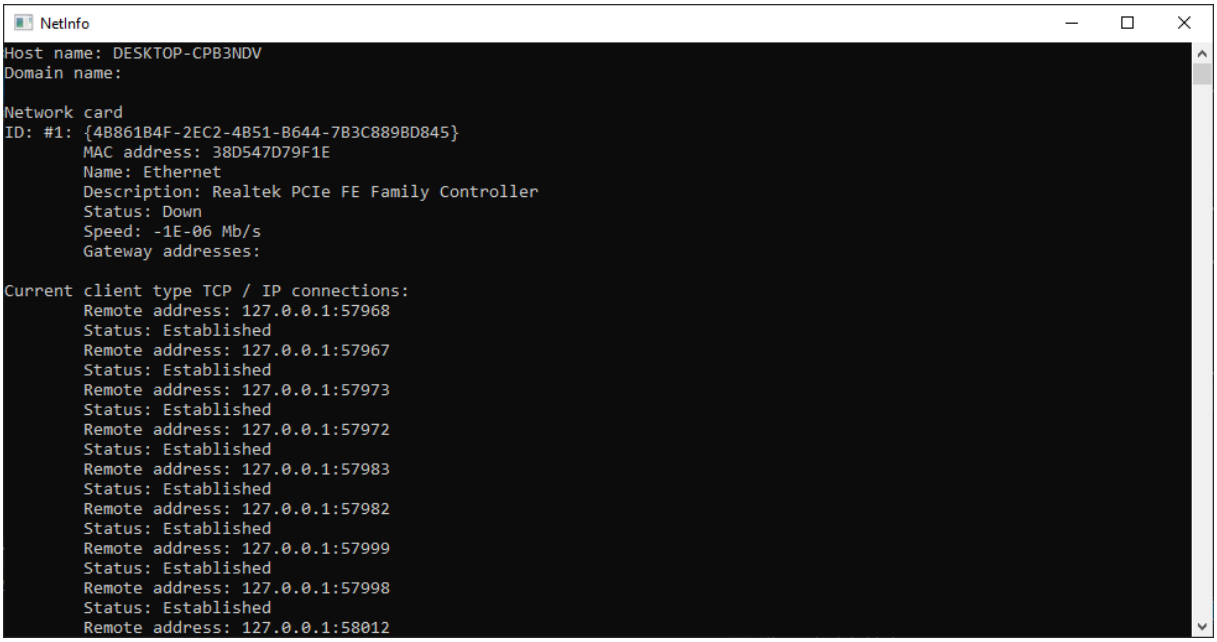
Introduction

This application is used to display a complete set of information on all network connections on your computer, information on network interfaces, and information on current TCP and UDP network connections.

Describing of the application’s operation



Drawing 1: The beginning of the application's operation [own study]

After starting the program, the user does nothing. The effects of the program's work can be seen immediately. The application displays everything about each of the user's computer network connections, network interfaces as well as current TCP and UDP network connections. There are certainly some bugs that the developer didn't discover while working on the app.

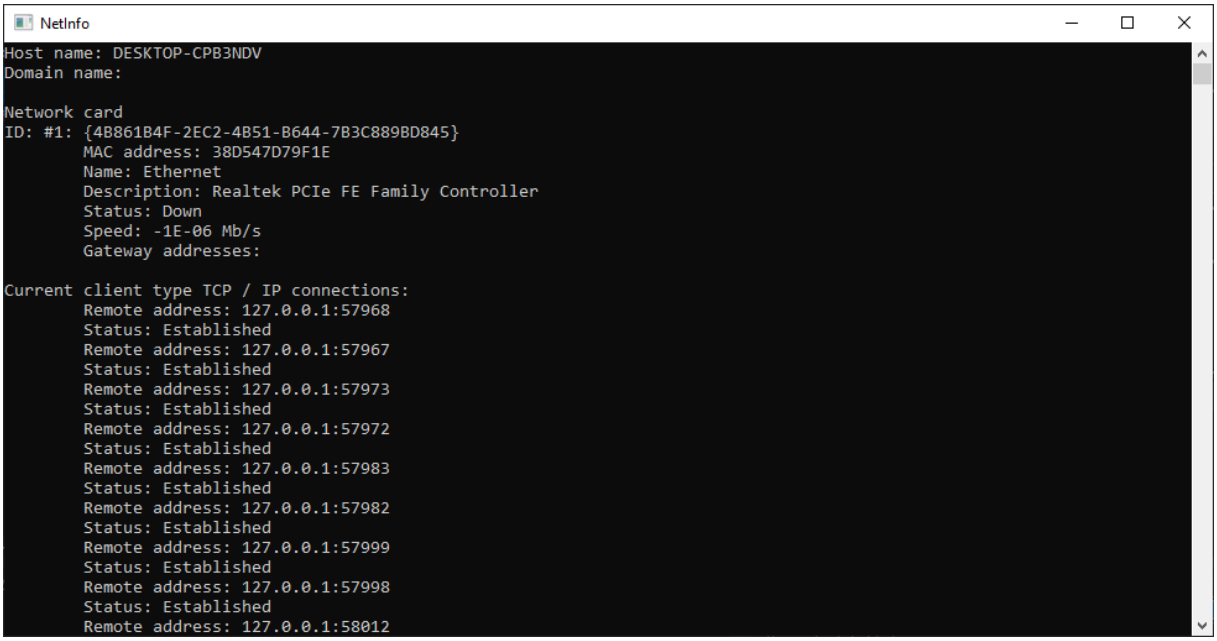
What is needed for use?

The application does not require installation. It only needs the Windows operating system.

Algorithm used

The basic form of the algorithm can be deduced from the previous section. It only needs the Windows operating system. In summary, the application displays a complete set of information on all network connections on your computer, information on network interfaces, and information on current TCP and UDP network connections.

Interface description



Drawing 2: Graphical interface [own study]

The interface is typical for a Console Application.

Source code description

The project was made in the C# programming language, in the Visual Studio Community 2017 programming environment. All work was done on the Windows 10 operating system. The application's source code looks like this.

```
using System;
using System.Net;
using System.Net.NetworkInformation;

namespace NetInfo
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.Title = "NetInfo";
            IPGlobalProperties wlasnosciIP =
IPGlobalProperties.GetIPGlobalProperties();
            Console.WriteLine("Host name: {0}", wlasnosciIP.HostName);
            Console.WriteLine("Domain name: {0}\r\n", wlasnosciIP.DomainName);
            int licznik = 0;
            foreach (NetworkInterface kartySieciowe in
NetworkInterface.GetAllNetworkInterfaces())
            {
                Console.WriteLine("Network card");
                Console.WriteLine("ID: #{0}: {1}", ++licznik, kartySieciowe.Id);
```

```
                Console.WriteLine("\tMAC address: {0}",
kartySieciowe.GetPhysicalAddress());
                Console.WriteLine("\tName: {0}", kartySieciowe.Name);
                Console.WriteLine("\tDescription: {0}", kartySieciowe.Description);
                Console.WriteLine("\tStatus: {0}", kartySieciowe.OperationalStatus);
                Console.WriteLine("\tSpeed: {0} Mb/s", (kartySieciowe.Speed) /
(double)1000000);
                Console.WriteLine("\tGateway addresses:");
                foreach(GatewayIPAddressInformation adresBramy in
kartySieciowe.GetIPProperties().GatewayAddresses)
                {
                    Console.WriteLine("\t\t{0}");
                    Console.WriteLine("\t\tDNS servers:");
                    foreach (IPAddress adresip in
kartySieciowe.GetIPProperties().DnsAddresses)
                        Console.WriteLine("\t\t\t{0}", adresip);
                    Console.WriteLine("\t\tDHCP servers:");
                    foreach (IPAddress adresip in
kartySieciowe.GetIPProperties().DhcpServerAddresses)
                        Console.WriteLine("\t\t\t{0}", adresip);
                    Console.WriteLine("\t\tWINS servers:");
                    foreach (IPAddress adresip in
kartySieciowe.GetIPProperties().WinsServersAddresses)
                        Console.WriteLine("\t\t\t{0}", adresip);
                    Console.WriteLine();
                }
                Console.WriteLine("\r\nCurrent client type TCP / IP connections:");
                foreach(TcpConnectionInformation polaczenieTCP in
IPGlobalProperties.GetIPGlobalProperties().
                    GetActiveTcpConnections())
                {
                    Console.WriteLine("\tRemote address: {0}:{1}",
polaczenieTCP.RemoteEndPoint.Address,
                        polaczenieTCP.RemoteEndPoint.Port);
                    Console.WriteLine("\tStatus: {0}", polaczenieTCP.State);
                }
                Console.WriteLine("\r\nCurrent TCP / IP server connections:");
                foreach (IPEndPoint polaczenieTCP in
IPGlobalProperties.GetIPGlobalProperties().
                    GetActiveTcpListeners())
                    Console.WriteLine("\tRemote address: {0}", polaczenieTCP.Port);
                Console.WriteLine("\r\nCurrent UDP connections:");
                foreach (IPEndPoint polaczenieUDP in
IPGlobalProperties.GetIPGlobalProperties().
                    GetActiveUdpListeners())
                    Console.WriteLine("\tRemote address: {0}", polaczenieUDP.Port);
                Console.ReadKey();
            }
        }
    }
}
```

Listing 1: Source code [own study]

List of drawings

Drawing 1: The beginning of the application's operation [own study]……...3

Drawing 2: Graphical interface [own study]……...……....4

List of listings

Listing 1: Source code [own study]……4