|  |
| --- |
| Design Doc (IPV4 Conversion) |
| Professor: Dr. Zhao  ] |

|  |
| --- |
| 2020 | By: Justin Winchester |

****

|  |
| --- |
| IPv4 Address Conversion Project: |
| Converts to Decimal & Network Byte Ordered Format |
| Dr. Zhao Chao  Network Programming  Ipv4 Conversation network equivalent in Binary & Decimal!  This program performs conversions of data representing IPv4 addresses. The address is entered in proper format which is a quad dotted decimal format used to represent IPv4 addresses numerically. An example of such an address format is as follows:  192.74.2.14  If you are viewing this information via the internet then there is a chance that your device may have a Internet Protocol Version 4 address!  These addresses allow for comments betweenness devices on computer networks!  Each four numerical values, separated by decimals or dots (periods), have a binary value ranging from 0-255 in decimal that the cpu can interpret.  This program uses functions to convert this IpV4 addresses entered into the network byte order allowing the character string to be converted into a decimal value the computer can manipulate to convert to its binary value for printing it and its corresponding decimal value to the output screen. |

***\*192.74.2.14 \****

If you are viewing this information via the internet, then there is a chance that your device may have an Internet Protocol Version 4 address!

These addresses allow for communication between devices on computer networks!

Each four numerical values, separated by decimals or dots (periods), have a binary value ranging from 0-255 in decimal that the CPU can interpret.

This program uses functions to convert the IpV4 address entered into the network byte order allowing the character string to be converted into a decimal value the computer can manipulate to convert to its binary value and its corresponding decimal value printing them both and the IPv4 address string to the output screen.

Program Output:::

[jw925682@ada: ~]$ g++ IPv4DBN.cpp

[jw925682@ada: ~]$ ./a.out

Hello: Please Enter An IPv4 Address in Dotted decimal Notation: 192.17.223.4

IPv4 String! 192.17.223.4

Decimal(Network Byte Ordered)Value! 81727936

Binary value of 192 = 11000000

Binary value of 17 = 10001

Binary value of 223 = 11011111

Binary value of 4 = 100

Do it again(y/n)?

Do it again(y/n)? y

Alright, Lets Try That Ipv4 Address One More Time!

Hello: Please Enter An IPv4 Address in Dotted decimal Notation: 223.45.68.12

IPv4 String! 223.45.68.12

Decimal(Network Byte Ordered)Value! 205794783

Binary value of 223 = 11011111

Binary value of 45 = 101101

Binary value of 68 = 1000100

Binary value of 12 = 1100

Do it again(y/n)?

Do it again(y/n)? y

Alright, Lets Try That Ipv4 Address One More Time!

Hello: Please Enter An IPv4 Address in Dotted decimal Notation: 172.34.224.78

IPv4 String! 172.34.224.78

Decimal(Network Byte Ordered)Value! 1323311788

Binary value of 172 = 10101100

Binary value of 34 = 100010

Binary value of 224 = 11100000

Binary value of 78 = 1001110

Do it again(y/n)?

Do it again(y/n)? n

[jw925682@ada: ~]$

Text

Description automatically generatedText

Description automatically generatedText

Description automatically generatedText

Description automatically generatedText

Description automatically generatedText

Description automatically generated