"""

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Final Project

Function and Class Object for project

"""

The Program that I have submitted is an IP address analyzer that will examine an IPv4 IP address that is inputted by the user and it will return to the user information about the IP address. The program will display the class that the address belongs to, the wildcard mask of the network, the subnet mask, and the possible number of hosts for that can be used for the network. This program is useful because it is intended to be a learning tool for individuals who are starting out learning computer networking and want to have a better understanding of how IPv4 networks work.

When started the program prompts the user to enter the IP address that they are curious about. The User is told to enter it in the correct format of an IPv4 address (XXX.XXX.XXX.XXX). When that is inputted, it is checked for the correct length, digits, and punctuation. The program then examines the octets and subtracts 255 from each one via a function in order to get the wildcard mask. It then uses a class to examine the first octet to display the network class and print the results. After that it opens a file and gets the number of possible hosts and displays the results.