

Program to translate a Domain or hostname to its IP address and vice versa

1. Importing Socket Dependencies and Packages

```
import socket
```

2. Function to find Domain name from IP address

gethostbyaddr() Given an IP address the function `socket.gethostbyaddr()` returns a tuple containing

Host Name, Alias list for the IP address if any, IP address of the host..

```
def get_domain():
    ip = input('Enter the IP Address : ')
    try:
        # this will get host name by domain
        domain = socket.gethostbyaddr(ip)
        print('The Domain IP address is : ', domain[0])
    except socket.error as err:
        print("Invalid IP Address")
```

3. Function to find IP address from Domain name

gethostbyname() returns the domain name according to ip address

```
def get_ip():
    domain = input('Enter Domain Name : ')
    try:
        ip = socket.gethostbyname(str(domain))
        print("IP Address : ", ip)
    except socket.gaierror as err:
        print("Invalid Domain Name -> Error : ", err)
```

4. Execution of Functions

```
get_ip()
get_domain()
```



```
Enter Domain Name : pythonanywhere.com
IP Address : 35.173.69.207
```

```
Enter the IP Address : 35.173.69.207
The Domain IP address is : ('ec2-35-173-69-207.compute-1.amazonaws.com', [], ['35.17
Enter Domain Name : 35.173.69.207
IP Address : 35.173.69.207
Enter the IP Address : 35.173.69.207
The Domain IP address is : ('ec2-35-173-69-207.compute-1.amazonaws.com', [], ['35.17
```



▼ 5. Screenshot

A screenshot of a terminal window with a dark blue background. The window title is "Run: ip x". On the left side, there is a vertical toolbar with icons for running, undo, redo, and other actions. The terminal text shows a script execution where the user enters a domain name and an IP address, and the script outputs the corresponding IP and domain addresses. The process ends with an exit code of 0.

```
Run: ip x
enter the domain name www.nitk.ac.in
the ip is → 210.212.194.4
enter the ip address 210.212.194.4
the domain address is → nitk.ac.in

Process finished with exit code 0
```