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**SUBJECT :** CN

**CLASS :** TE

**BRANCH :** AI&DS

**EXPERIMENT NO :12**

**TITLE :**

**Write a program for DNS lookup. Given an IP address input, it should return URL and vice-versa.**

**CODE:**

**import socket**

**# Sample data (IP to URL mapping)**

**ip\_url\_mapping = {**

**'192.0.2.1': 'www.example.com',**

**'192.0.2.2': 'www.openai.com',**

**'192.0.2.3': 'www.google.com',**

**'192.0.2.4': 'www.github.com'**

**}**

**# Function for IP to URL lookup**

**def ip\_to\_url(ip):**

**return ip\_url\_mapping.get(ip, 'No URL found for this IP.')**

**# Function for URL to IP lookup**

**def url\_to\_ip(url):**

**for ip, u in ip\_url\_mapping.items():**

**if u == url:**

**return ip**

**return 'No IP found for this URL.'**

**# Sample usage**

**while True:**

**user\_input = input("Enter an IP address or URL (type 'exit' to quit): ")**

**if user\_input.lower() == 'exit':**

**break**

**if user\_input.replace('.', '').isdigit():**

**ip\_address = user\_input**

**print(f"URL for {ip\_address} is {ip\_to\_url(ip\_address)}")**

**else:**

**url = user\_input**

**print(f"IP for {url} is {url\_to\_ip(url)}")**

**OUTPUT:**

