Write a program for DNS lookup. Given an IP address as input, it should return URL and viceversa.

import java.net.\*;

import java.util.Scanner;

public class DnsLookup {

    public static String lookupByIp(String ip) {

        try {

            InetAddress inetAddress = InetAddress.getByName(ip);

            return inetAddress.getHostName(); // Return the hostname

        } catch (UnknownHostException e) {

            return "Reverse lookup failed.";

        }

    }

    public static String lookupByHostname(String hostname) {

        try {

            InetAddress inetAddress = InetAddress.getByName(hostname);

            return inetAddress.getHostAddress(); // Return the IP address

        } catch (UnknownHostException e) {

            return "Invalid hostname.";

        }

    }

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter an IP address or URL: ");

        String input = scanner.nextLine();

        try {

            InetAddress address = InetAddress.getByName(input);

            if (address instanceof Inet4Address || address instanceof Inet6Address) {

                String hostname = lookupByIp(input);

                System.out.println("IP Address: " + input + " -> Hostname: " + hostname);

            } else {

                String ip = lookupByHostname(input);

                System.out.println("Hostname: " + input + " -> IP Address: " + ip);

            }

        } catch (UnknownHostException e) {

            String ip = lookupByHostname(input);

            System.out.println("Hostname: " + input + " -> IP Address: " + ip);

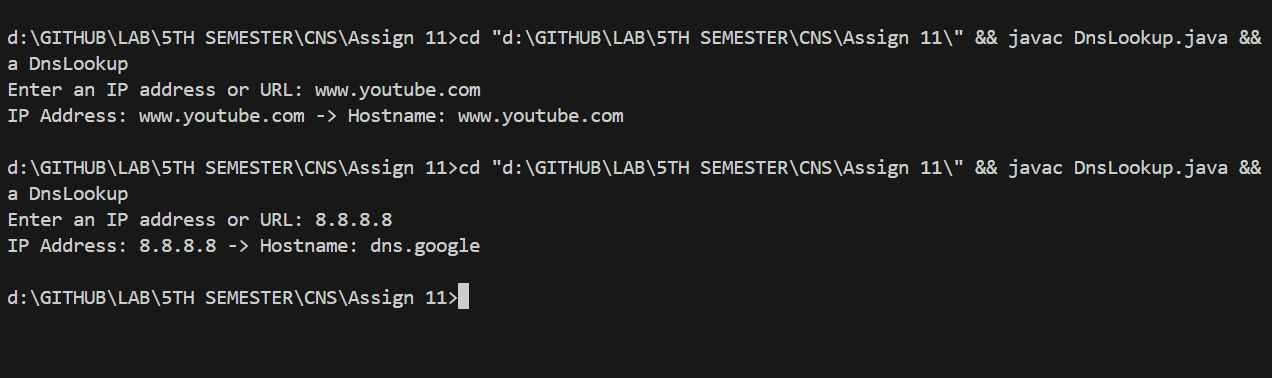
        }

        scanner.close(); // Close the scanner

    }

}

**Output:**

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