

[CLA Hands-On] Introduction to Networks

Objective:

The goal of this assignment is to create a simple HTML page that displays "Hello" followed by your name. You will then make this page accessible on your local network and later on the internet using Ngrok. This exercise will help you understand basic HTML, local web hosting, network configuration, and how to use Ngrok for public access.

Instructions:

1. Set Up Visual Studio Code:
 - If you haven't already, download and install **Visual Studio Code**.
 - Install the **Live Server extension** for Visual Studio Code. You can do this by going to the Extensions view in VS Code (Ctrl+Shift+X), searching for "**Live Server**", and installing it.
2. Create an HTML Page:
 - Open Visual Studio Code and create a new file named index.html.
 - Inside this file, write the HTML code to display the text "**Hello [Your Name]**". For example:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
  <title>Hello Page</title>
</head>
<body>
  <h1>Hello Sohaib</h1>
</body>
</html>
```

- Save the file.
- Host the HTML Page Locally Using Live Server: Right-click on your index.html file in the Explorer view and select "Open with Live Server". This will start a local server and open your HTML page in your default web browser.
- Your HTML page should now be accessible at a local address, typically something like **http://127.0.0.1:5500/index.html**.

3. Access the Page on Your Local Network:

- Ensure your phone is connected to **the same network (Wi-Fi)** as your computer.
- Find your computer's local IP address:
- On Windows: Open Command Prompt and type **ipconfig**. Look for the "**IPv4 Address**" under your network connection.
- On Mac/Linux: Open Terminal and type **ifconfig** or **ip a** and look for the "inet" address.
- On your phone's browser, enter **http://[Your IP Address]:5500/index.html** to access the HTML page. For example, `http://192.168.1.2:5500/index.html`.

4. Configure Firewall Settings (For Windows Users):

- You may need to allow Visual Studio Code through your firewall to access the server from another device.
- Go to Control Panel > System and Security > Windows Defender Firewall > Allow an app or feature through Windows Defender Firewall.
- Find and allow Visual Studio Code on both private and public networks.

5. Make the Page Public Using Ngrok:

- Download and install Ngrok from ngrok.com.
- Open a new command prompt or terminal window and run the following command to start Ngrok and tunnel HTTP traffic to your local server:

```
ngrok http 5500
```

- Ngrok will provide a public URL (e.g., **`http://abcd1234.ngrok.io`**). Copy this URL.
- You can now access your HTML page from anywhere using this public URL.