**Step-by-Step Guide to Installing WSL and Ubuntu on Windows 11**

**1. Enable WSL Feature**

* Open **Control Panel** → go to **Programs and Features** → click **Turn Windows features on or off**.
* Alternatively, search **"Turn Windows features on or off"** from the Windows search bar.
* Check the box for **"Windows Subsystem for Linux"**.
* Click **OK** and **restart** the computer to apply changes.

**2. Check WSL Installation via Command Prompt**

* Open **Command Prompt**.
* Type bash and press Enter.
* You’ll see a message: “**No installed distributions**”.
* A link will be provided to download a Linux distro from Microsoft Store.

**3. Install Linux Distribution (Ubuntu)**

* Open **Microsoft Store**.
* Search for **“Ubuntu”** (or just “Linux” to see more options).
* Click **Get** to install the **generic Ubuntu app** (it installs the latest stable LTS version).
* If already installed, click **Open**.

**4. Fix WSL 2 Kernel Update Error (If Appears)**

* You may see: **"WSL 2 requires an update to its kernel component."**
* Go to the provided Microsoft link.
* Download the **WSL kernel update package** (wsl\_update\_x64.msi).
* Run the installer and complete the setup wizard.

**5. Set Up Ubuntu for First Use**

* After the kernel update, open **Ubuntu** from the Start Menu.
* Wait for installation to complete.
* You’ll be prompted to create:
  + A **default Unix username** (any name, doesn't have to match Windows).
  + A **password** for the Unix user.

**6. Use Ubuntu Bash Terminal**

* You now have access to a **fully functional Ubuntu terminal**.
* Try basic commands like:
  + ls -al → list files and folders
  + pwd → print working directory

**7. Access Windows File System from Linux**

* Windows drives (e.g. C:, D:) are mounted under /mnt.
* Example: access the C drive via /mnt/c.
* Navigate to Desktop: /mnt/c/Users/<YourUsername>/Desktop
* Create a file: touch test.txt

**8. Run Ubuntu Bash from Windows Command Prompt**

* You can also open the Ubuntu terminal by just typing bash in **Command Prompt**.

**Summary of Key Features:**

* **Seamless Integration:** Linux inside Windows without dual boot/VMs.
* **Simple Installation:** Through Microsoft Store.
* **Cross-Platform Access:** Use Linux tools on Windows files.
* **Security:** Separate Unix user environment.
* **Developer-Friendly:** Great for coding, scripting, and dev workflows.