Ubuntu VirtualBox Setup Guide for Windows Users

Step 1: Install VirtualBox

1. Go to: https://www.virtualbox.org/wiki/Downloads
2. Under 'VirtualBox platform packages', download 'Windows hosts'.
3. Run the installer and follow the defaults.
4. (Optional) Also download and install the Extension Pack from the same page.

Step 2: Download Ubuntu ISO

1. Go to: https://ubuntu.com/download/desktop
2. Download Ubuntu 22.04 LTS (recommended for stability).
   - File will be named something like 'ubuntu-22.04.4-desktop-amd64.iso'

Step 3: Create a New Virtual Machine

1. Open VirtualBox.
2. Click 'New'.
3. Fill in:
   - Name: Ubuntu
   - Type: Linux
   - Version: Ubuntu (64-bit)
4. Click 'Next'.

Step 4: Configure Memory and Disk

1. Memory Size: Choose at least 4096 MB (4 GB) if possible.
2. Hard disk:
   - Create a virtual hard disk now → Next
   - Type: VDI
   - Storage: Dynamically allocated
   - Size: At least 25 GB → Create

Step 5: Attach Ubuntu ISO and Install

1. With your VM selected, click Settings → Storage.
2. Click the empty CD icon under 'Controller: IDE'.
3. On the right side, click the CD icon → 'Choose a disk file' → select the Ubuntu ISO.
4. Click OK.
5. Start the VM by clicking Start.

Step 6: Install Ubuntu in VirtualBox

1. Ubuntu will boot from the ISO.
2. Choose 'Install Ubuntu'.
3. Follow the wizard:
   - Use defaults for keyboard and updates
   - Choose 'Erase disk and install Ubuntu'
4. Pick a username and password you'll remember.
5. After install, reboot when prompted.
6. If it boots the installer again, go to Devices → Optical Drives → Remove disk from virtual drive → Reboot.

Step 7: (Optional) Install Guest Additions

1. In Ubuntu, go to Devices → Insert Guest Additions CD image.
2. Open a terminal:
   sudo apt update
   sudo apt install build-essential dkms linux-headers-$(uname -r)
3. Follow prompts to run the installer from the CD.

Step 8: Set Up the Research Code

1. Open a terminal and run:
   git clone https://github.com/your-lab/your-research-project.git
   cd your-research-project

Tips for Students

- Terminal: Ctrl + Alt + T
- Full screen: Host + F (usually Right Ctrl + F)
- Copy/Paste: Enable shared clipboard in VirtualBox → Settings → General → Advanced