# Setting up ESP-IDF with VS Code on Ubuntu

Setting up ESP-IDF with VS Code on Ubuntu involves several steps. Here's a detailed guide to help you set up your development environment:  
  
### Step 1: Install Prerequisites  
  
#### A. Install Python (Skip if Already installed in CDAC Systems)  
  
ESP-IDF requires Python. Open a terminal and run:  
  
  
sudo apt update  
sudo apt install python3 python3-pip  
  
  
#### B. Install Git (Skip if Already installed in CDAC Systems)  
  
Install Git by running:  
  
  
sudo apt install git  
  
  
### Step 2: Download and Set Up ESP-IDF  
  
#### A. Download ESP-IDF Tools  
  
1. \*\*Clone the ESP-IDF repository\*\*:  
  
  
 mkdir -p ~/esp  
 cd ~/esp  
 git clone --recursive https://github.com/espressif/esp-idf.git  
  
  
2. \*\*Navigate to the ESP-IDF directory\*\*:  
  
  
 cd esp-idf  
  
  
3. \*\*Run the ESP-IDF tools installation script\*\*:  
  
  
 ./install.sh  
  
  
4. \*\*Set up the ESP-IDF environment variables\*\*:  
  
   
 . ./export.sh  
  
  
To make these environment variables available in each terminal session, add the export command to your shell profile (`.bashrc`, `.zshrc`, etc.):  
  
echo ". $HOME/esp/esp-idf/export.sh" >> ~/.bashrc  
source ~/.bashrc  
  
  
  
### Step 3: Install ESP-IDF VS Code Extension  
  
1. \*\*Open VS Code\*\*.  
  
2. \*\*Install the ESP-IDF Extension\*\*:  
 - Open the Extensions view by clicking on the Extensions icon in the Activity Bar on the side of the window or by pressing `Ctrl+Shift+X`.  
 - Search for `ESP-IDF` and click `Install` on the `Espressif IDF` extension.  
  
### Step 4: Configure the ESP-IDF Extension  
  
1. \*\*Open the Command Palette\*\*:  
 - Press `Ctrl+Shift+P` to open the Command Palette.  
  
2. \*\*Run the `**ESP-IDF: Configure ESP-IDF extension**` command\*\*:  
 - This command will guide you through the configuration process, including setting up paths for Python, Git, and ESP-IDF.

3. Select **Advance Option** and choose default option and finish