**To set Python 3.12 as the default version on your virtual machine, you can follow these steps:**

Update Alternatives: The update-alternatives command is used to manage alternative versions of commands and applications on Debian-based systems like Ubuntu. First, update the alternatives for the python3 command:

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sudo update-alternatives --install /usr/bin/python3 python3 /usr/bin/python3.8 1

sudo update-alternatives --install /usr/bin/python3 python3 /usr/bin/python3.12 2

Here, we're registering both Python 3.8 and Python 3.12 as alternatives for the python3 command. The last number (1 and 2) represents the priority, with a higher number indicating a higher priority.

Configure Alternatives: After registering the alternatives, you can configure which version should be the default:

Copy code

sudo update-alternatives --config python3

This command will display a list of available alternatives, along with their current status. Enter the number corresponding to Python 3.12 to set it as the default.

Verify the Default Version: To verify that Python 3.12 is now the default version, run:

Copy code

python3 --version

This should print the version number of Python 3.12.

Update Other Executables: If you want to update other Python executables like pip and idle to use the new default version, you can run the following commands:

Copy code

sudo update-alternatives --install /usr/bin/pip3 pip3 /usr/bin/pip3.8 1

sudo update-alternatives --install /usr/bin/pip3 pip3 /usr/bin/pip3.12 2

sudo update-alternatives --config pip3

sudo update-alternatives --install /usr/bin/idle3 idle3 /usr/bin/idle3.8 1

sudo update-alternatives --install /usr/bin/idle3 idle3 /usr/bin/idle3.12 2

sudo update-alternatives --config idle3

After following these steps, Python 3.12 should be set as the default version on your virtual machine. Note that if you have any scripts or applications that explicitly call a specific Python version, you may need to update them accordingly.