9. Open and close the APP control program

9.1 What is a self-starting APP program at boot?

In order to easily experience the functions of DOGZILLA's APP and controller, DOGZILLA has added a program to the default system of Ubuntu 20.04. This program integrates the control functions of APP and controller. When DOGZILLA is turned on, this program will automatically start, so it is called "Start the APP control program automatically when you turn on the computer".

The APP program is automatically launched at startup just to facilitate the experience of mobile APP and controller functions. In actual development, in order to avoid occupying the device, the APP program needs to be closed. Therefore, before developing the program, please manually close the APP program that automatically starts at startup.

There are two ways to close a self-starting APP. One is to close it only once and it will automatically start the next time you turn on the phone, which is called temporary shutdown. The other way is to close it and it will not start automatically the next time you turn on the phone. This is called permanent shutdown.
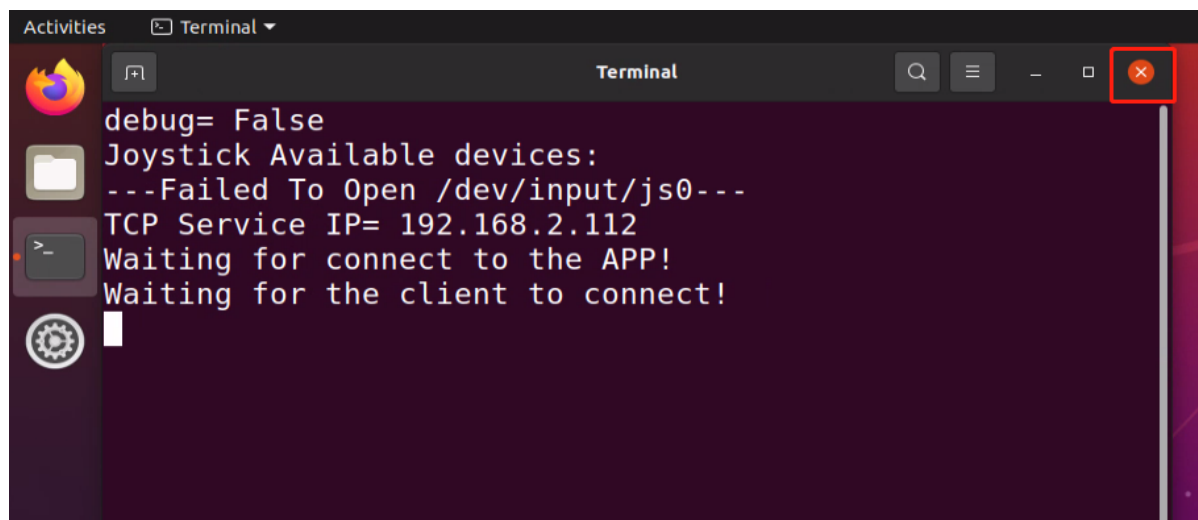
9.2, PI4 version app program self-starting tutorial

 Temporarily close large programs:

If you have a display screen, mouse and keyboard, log in to the desktop after connecting.

If there is no display screen, mouse and keyboard, please use a computer in the same LAN to open the VNC Viewer software and log in to the desktop remotely to enter the desktop.

After entering the desktop, you will see a terminal. Just click the X symbol in the upper left corner to close the terminal to close the large program. Sometimes you may be prompted that closing the terminal will close the running program. Just select Confirm to close.
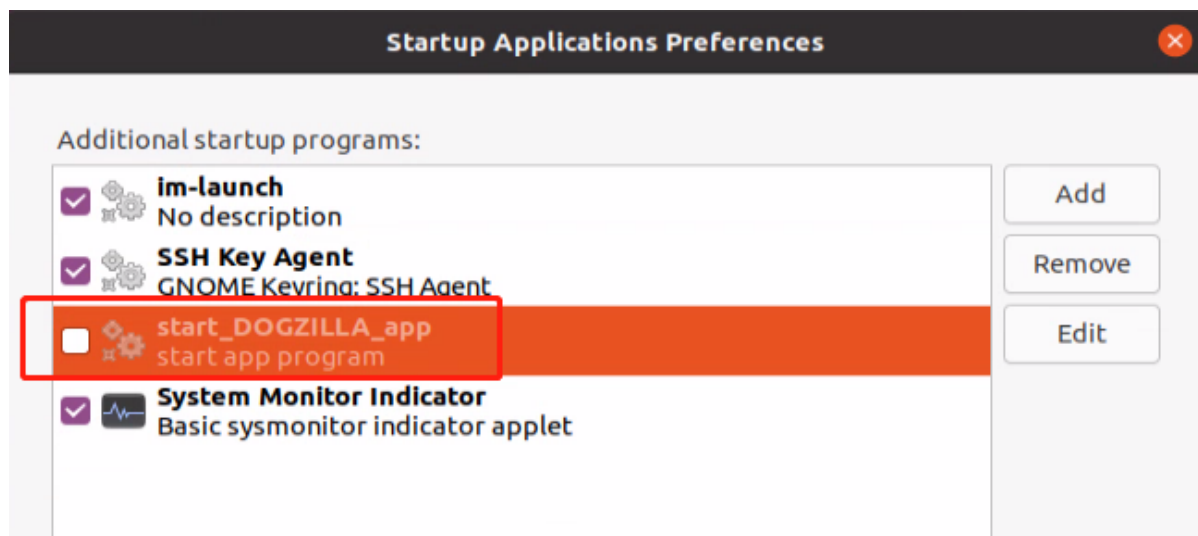
If there is no desktop environment, you can also run the following command to forcefully close the APP control program:

```
sh ~/DOGZILLA/app_dogzilla/kill_dogzilla.sh
```
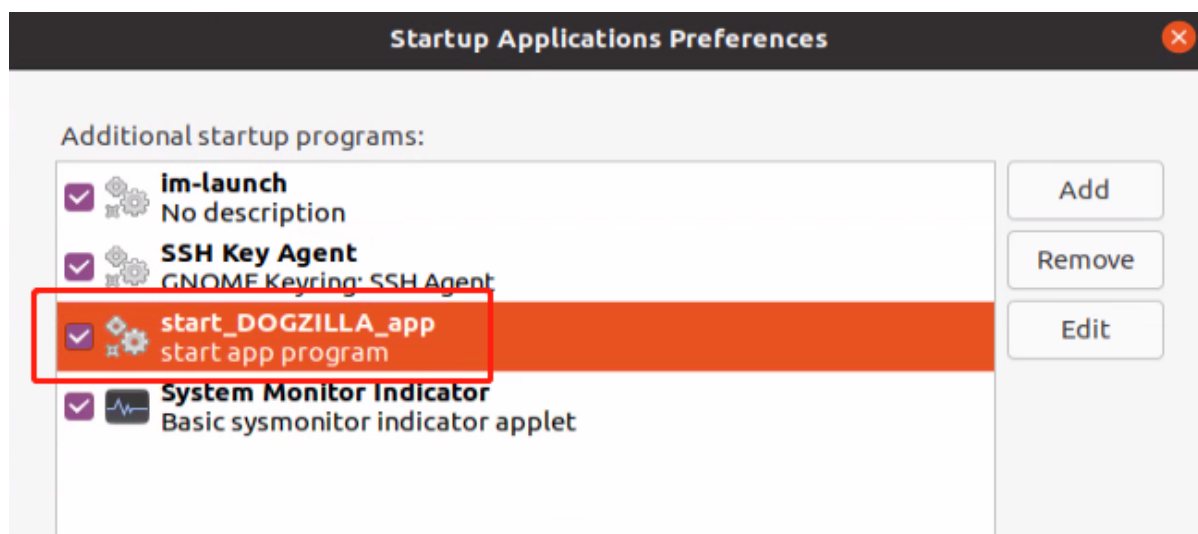
Permanently close large programs

First, close the running APP program according to the temporary shutdown method.

After opening the Ubuntu system application, search for Startup Applications, and uncheck the box in front of start_DOGZILLA_app, as shown in the figure below, to permanently close the large program.

Set up the APP program to start automatically at boot:

Open the Ubuntu system application, search for Startup Applications, and check the box in front of start_DOGZILLA_app, as shown in the figure below, then Transbot will automatically start the APP program next time it is turned on.

Temporarily start the APP program:

If you need to manually move the DOGZILLA app program, please open the system terminal first, then enter the command and press Enter to run:

```
python3 /home/pi/DOGZILLA/app_dogzilla/app_dogzilla.py
```
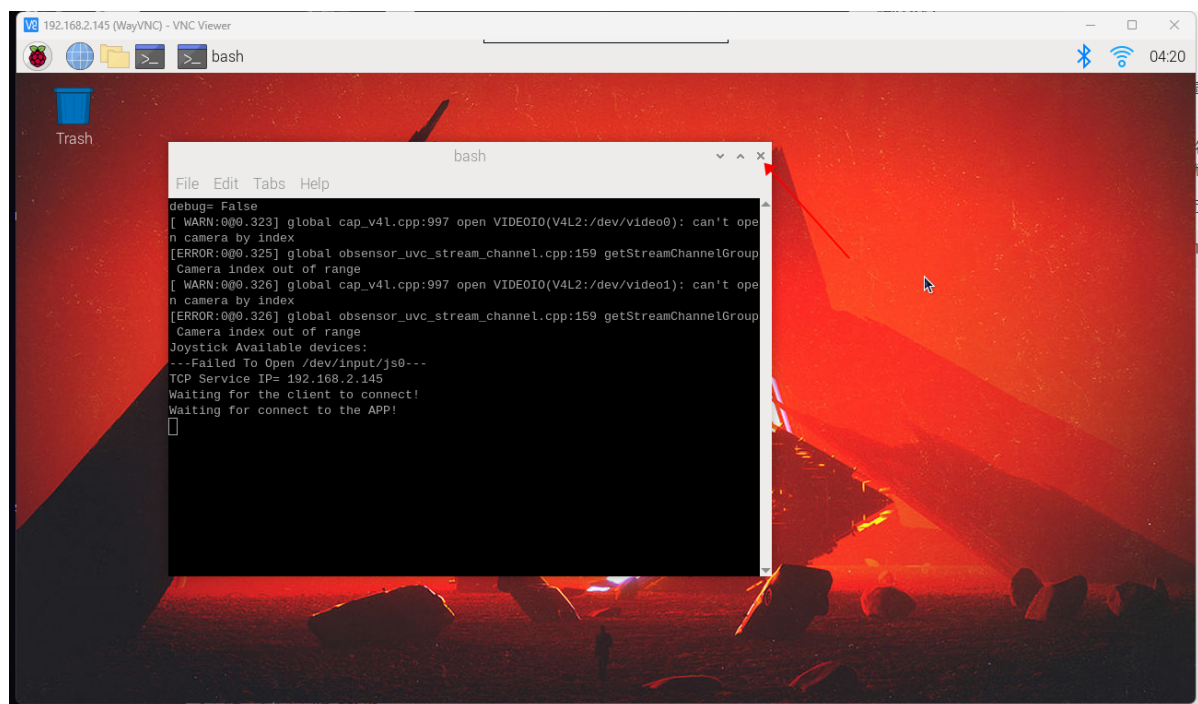
9.3, PI5 version app program self-starting tutorial

Temporarily close large programs:

If you have a display screen, mouse and keyboard, log in to the desktop after connecting.

If there is no display screen, mouse and keyboard, please use a computer in the same LAN to open the VNC Viewer software and log in to the desktop remotely to enter the desktop.

After entering the desktop, you will see a terminal. Just click the X symbol in the upper left corner to close the terminal to close the large program. Sometimes you may be prompted that closing the terminal will close the running program. Just select Confirm to close.

If there is no desktop environment, you can also run the following command to forcefully close the APP control program:
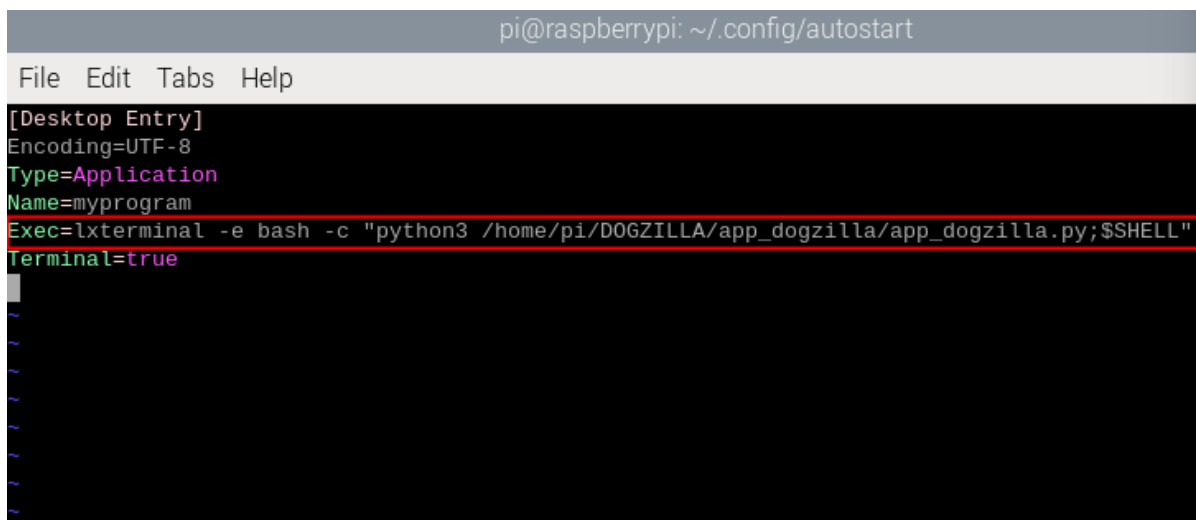
```
sh ~/DOGZILLA/app_dogzilla/kill_dogzilla.sh
```

Permanently close large programs:

First, close the running APP program according to the temporary shutdown method.
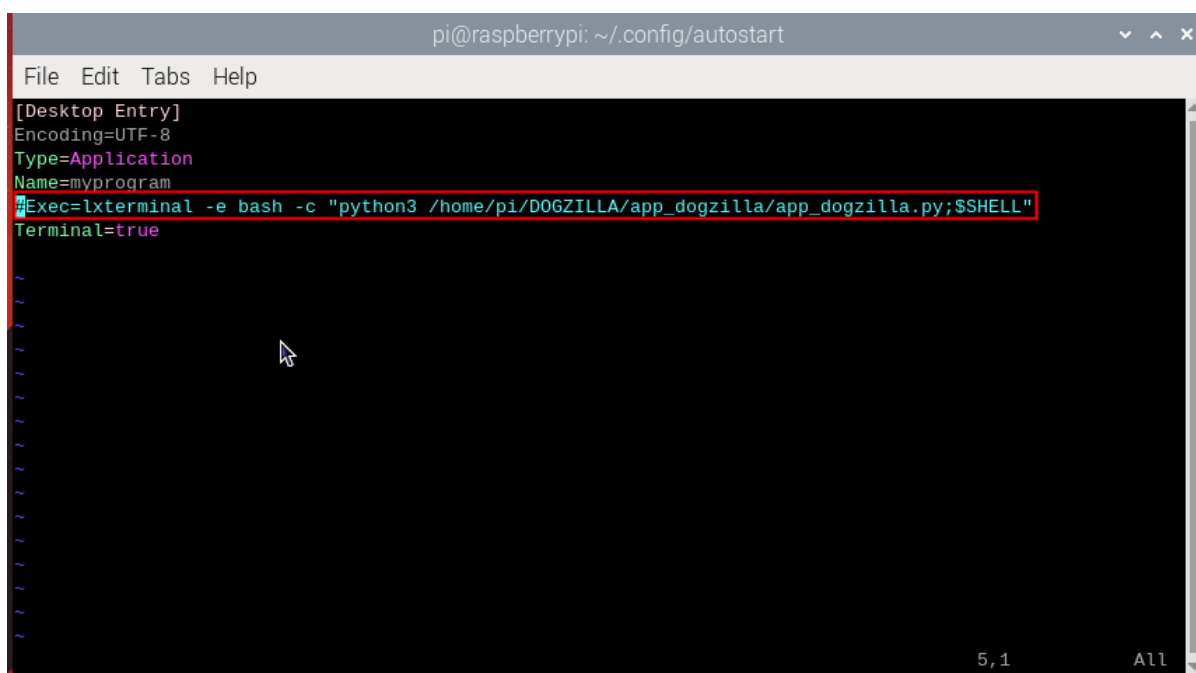
```
cd .config/autostart/
sudo vi app.desktop
```

Open the self-starting desktop file, comment out the self-starting script, and finally save and exit.

Change to the picture below, save and exit

Note: If you want to start automatically again, just remove the comment.

vi editor operation: After opening the file, enter i to start editing. After editing is completed, press ESC, then enter: wq to save and exit the file!

Temporarily start the APP program

If you need to manually move the DOGZILLA app program, please open the system terminal first, then enter the command and press Enter to run:

```
python3 /home/pi/DOGZILLA/app_dogzilla/app_dogzilla.py
```