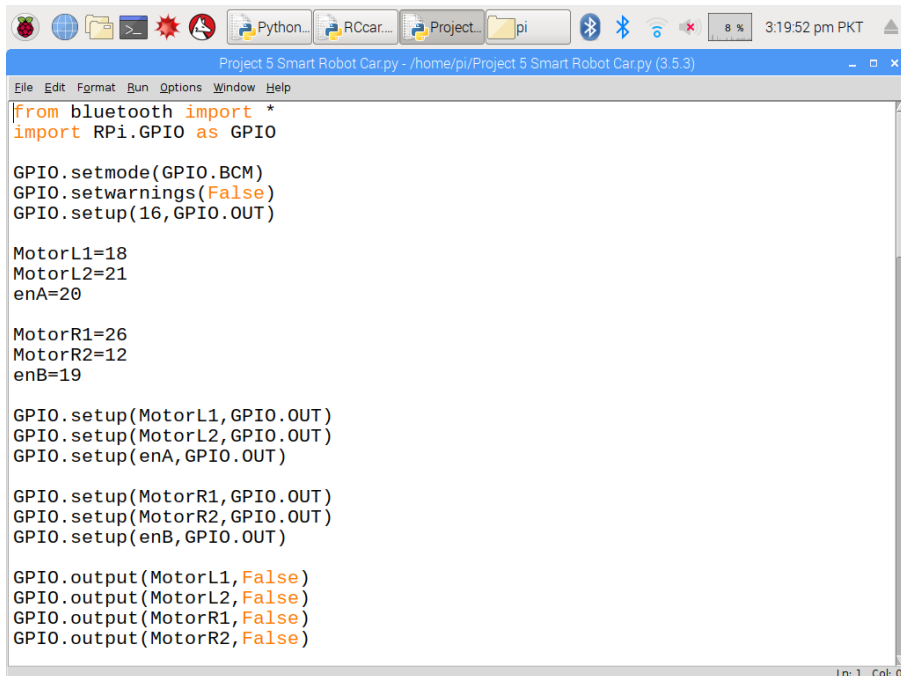


# MAKING YOUR RASPBERRY PI BOOTLOAD TO CONTROL BUMBLEPI

## Step 1:

- Open your Bluetooth RC car code on Python 3.



```
Project 5 Smart Robot Car.py - /home/pi/Project 5 Smart Robot Car.py (3.5.3)
File Edit Format Run Options Window Help
from bluetooth import *
import RPi.GPIO as GPIO

GPIO.setmode(GPIO.BCM)
GPIO.setwarnings(False)
GPIO.setup(16,GPIO.OUT)

MotorL1=18
MotorL2=21
enA=20

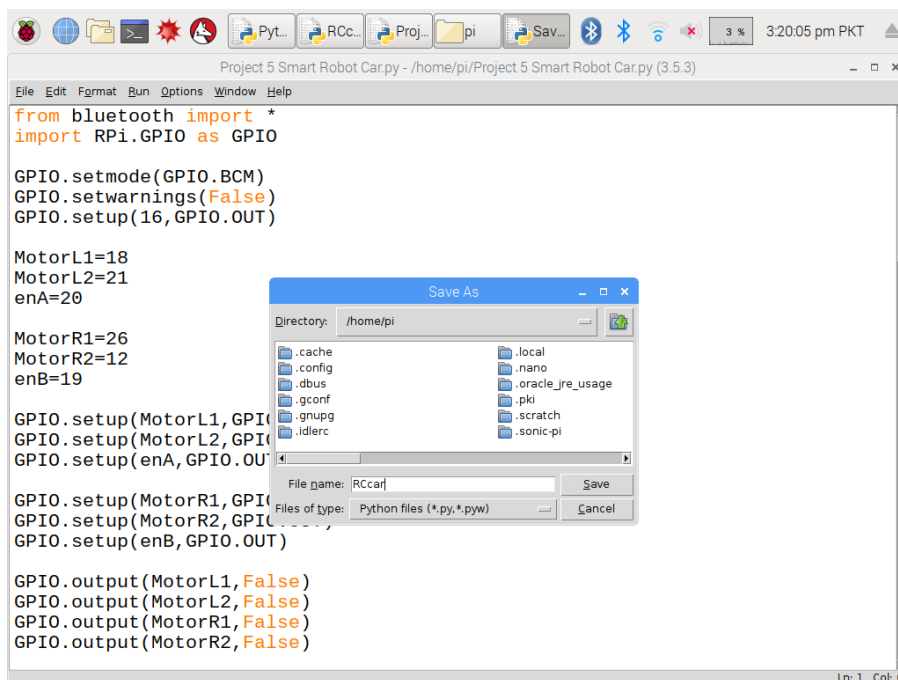
MotorR1=26
MotorR2=12
enB=19

GPIO.setup(MotorL1,GPIO.OUT)
GPIO.setup(MotorL2,GPIO.OUT)
GPIO.setup(enA,GPIO.OUT)

GPIO.setup(MotorR1,GPIO.OUT)
GPIO.setup(MotorR2,GPIO.OUT)
GPIO.setup(enB,GPIO.OUT)

GPIO.output(MotorL1,False)
GPIO.output(MotorL2,False)
GPIO.output(MotorR1,False)
GPIO.output(MotorR2,False)
Ln: 1 Col: 0
```

- Save it as RCcar.py



```
Project 5 Smart Robot Car.py - /home/pi/Project 5 Smart Robot Car.py (3.5.3)
File Edit Format Run Options Window Help
from bluetooth import *
import RPi.GPIO as GPIO

GPIO.setmode(GPIO.BCM)
GPIO.setwarnings(False)
GPIO.setup(16,GPIO.OUT)

MotorL1=18
MotorL2=21
enA=20

MotorR1=26
MotorR2=12
enB=19

GPIO.setup(MotorL1,GPIO)
GPIO.setup(MotorL2,GPIO)
GPIO.setup(enA,GPIO.OU

GPIO.setup(MotorR1,GPIO)
GPIO.setup(MotorR2,GPIO)
GPIO.setup(enB,GPIO.OUT)

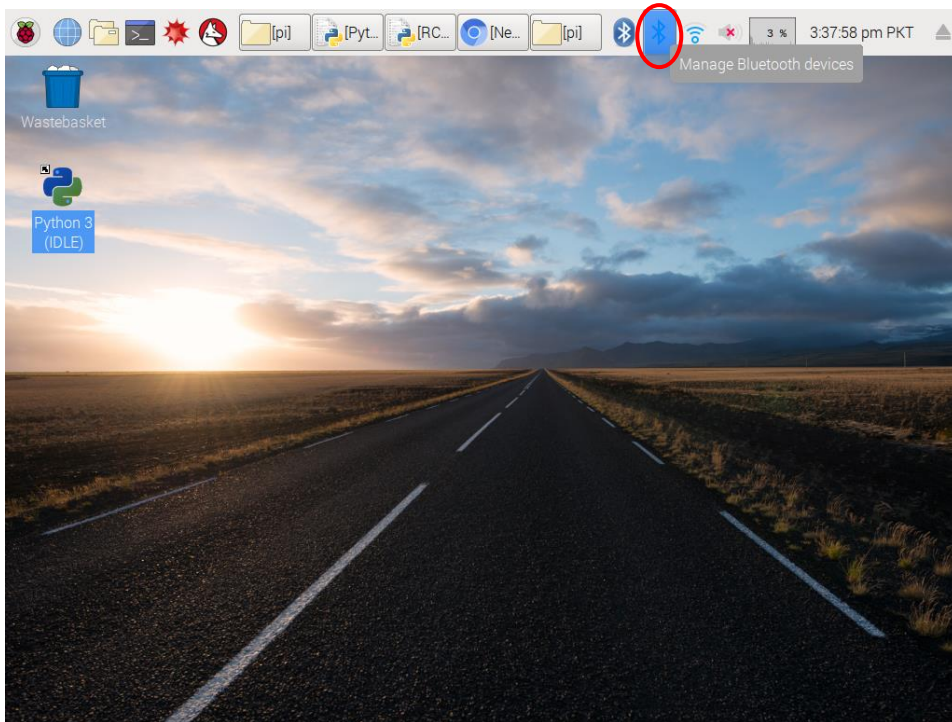
GPIO.output(MotorL1,False)
GPIO.output(MotorL2,False)
GPIO.output(MotorR1,False)
GPIO.output(MotorR2,False)
Ln: 1 Col: 0
```

Save As dialog box details:

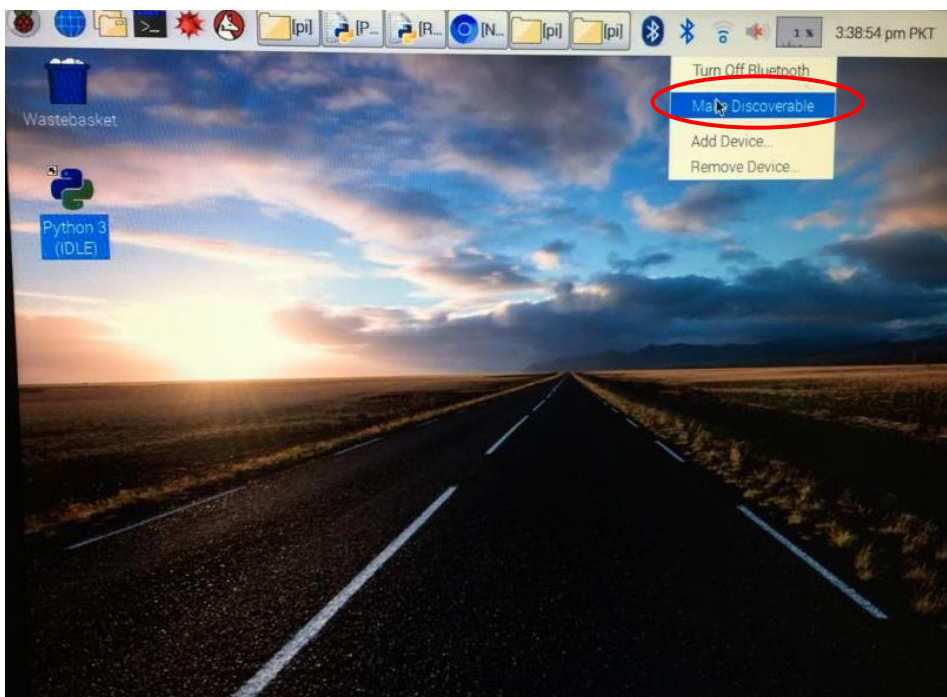
- Directory: /home/pi
- File name: RCcar.py
- Files of type: Python files (\*.py,\*.pyw)

## Step 2 (Connect Bluetooth):

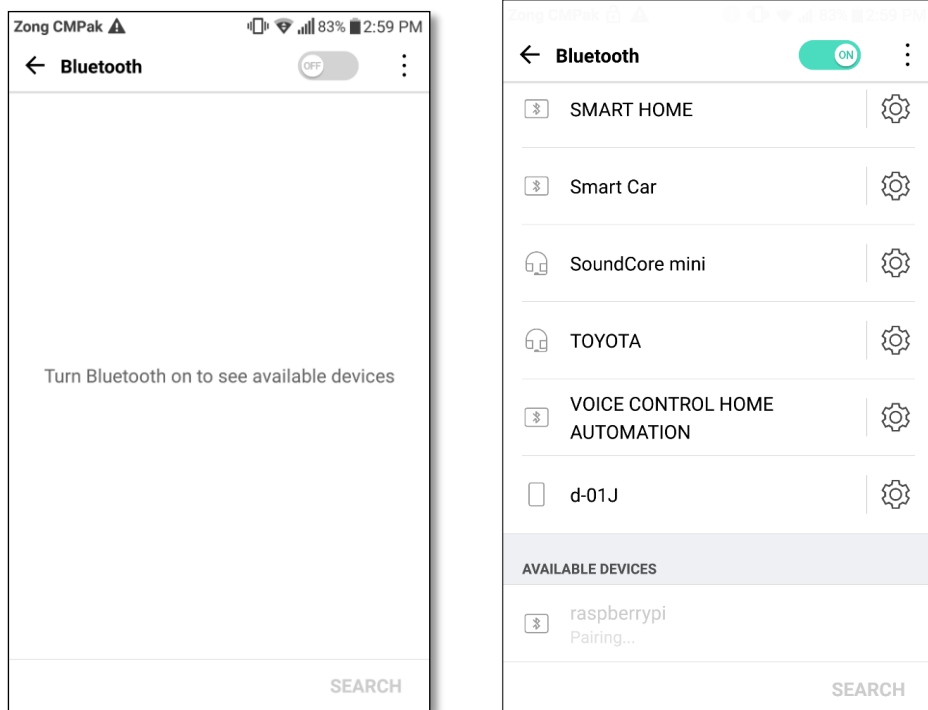
- Click on Manage Bluetooth devices icon.



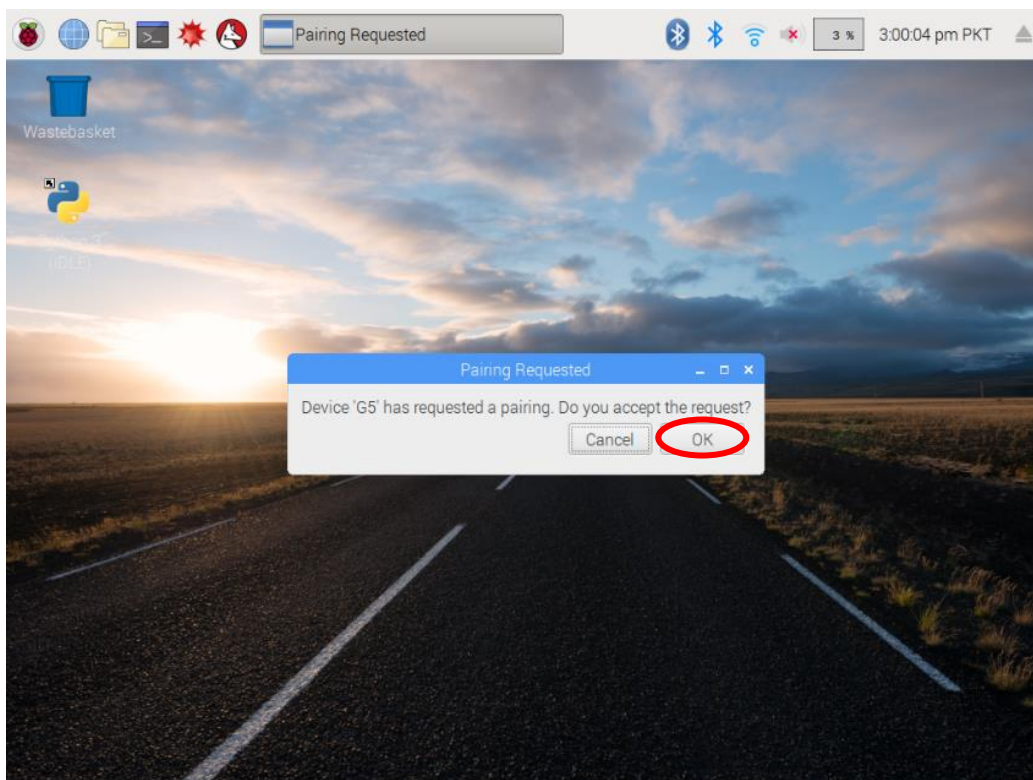
- Make your RaspberryPi's Bluetooth discoverable.



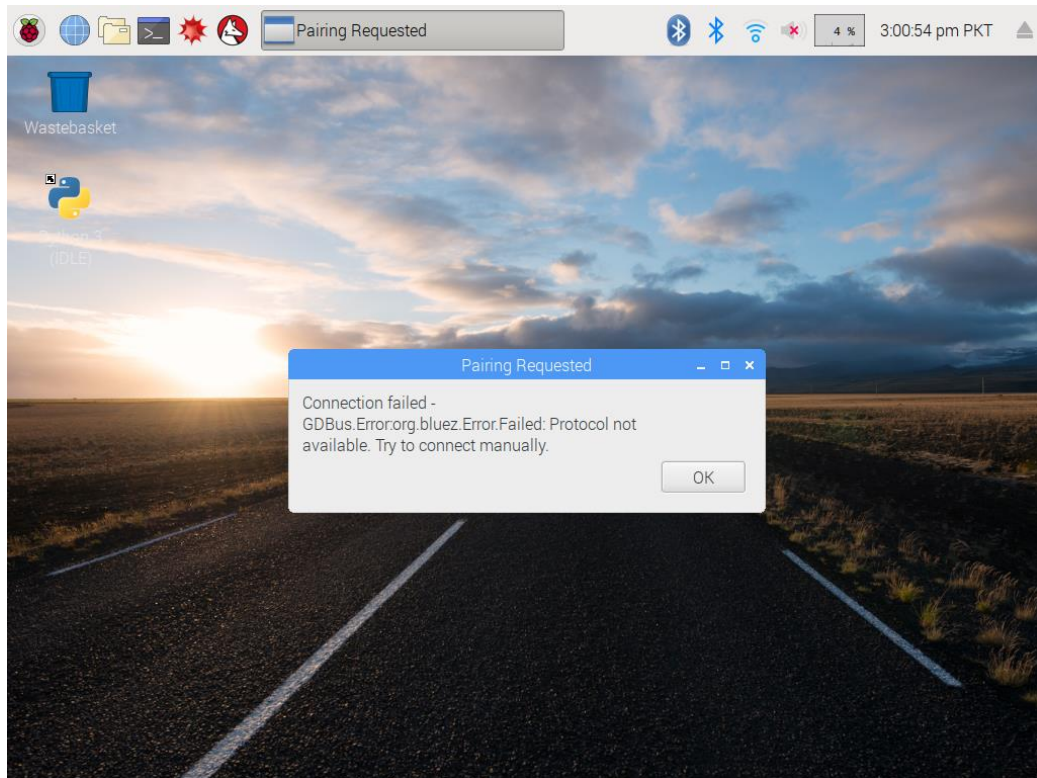
- Turn on Bluetooth from your smart phone, search devices and select “raspberrypi” from available devices.



- Pair your device with raspberry pi by clicking ‘OK’.

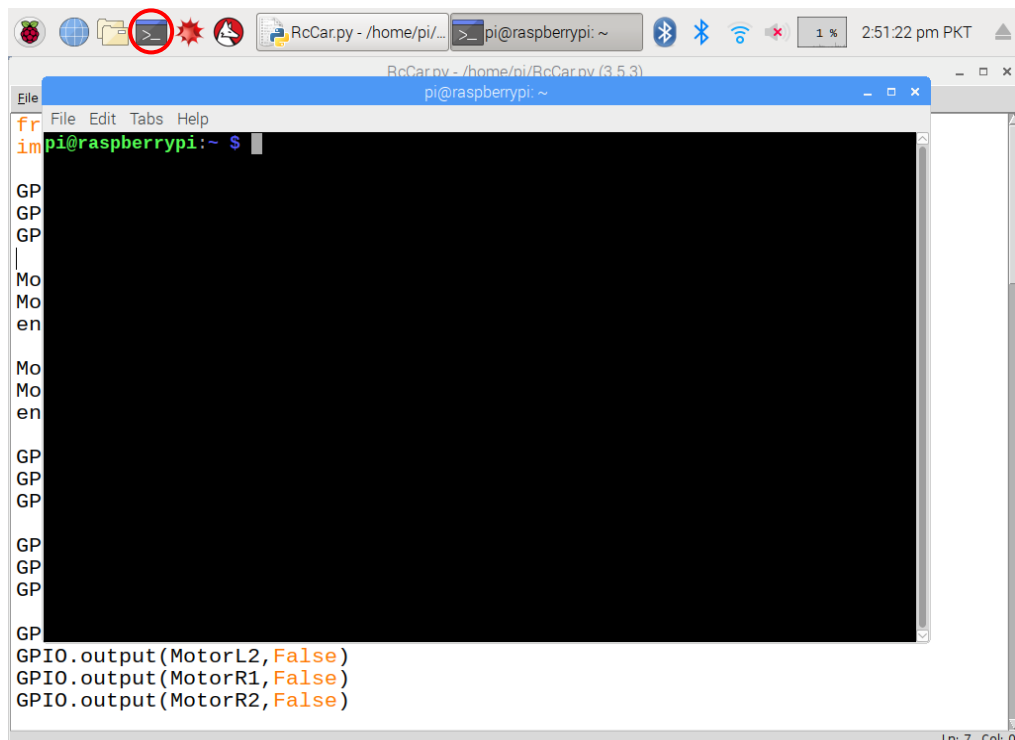


- This message shows that you're paired with raspberry pi and not connected yet. Click 'OK'.

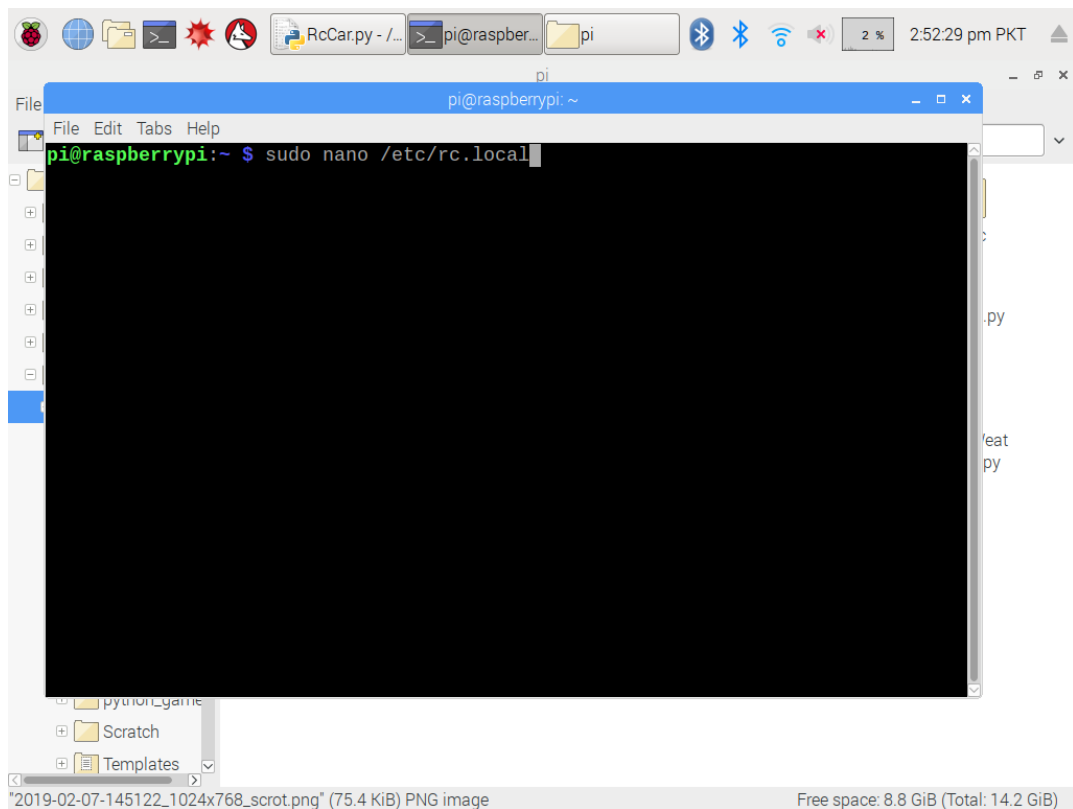


### Step 3 (Making BOOTLOAD):

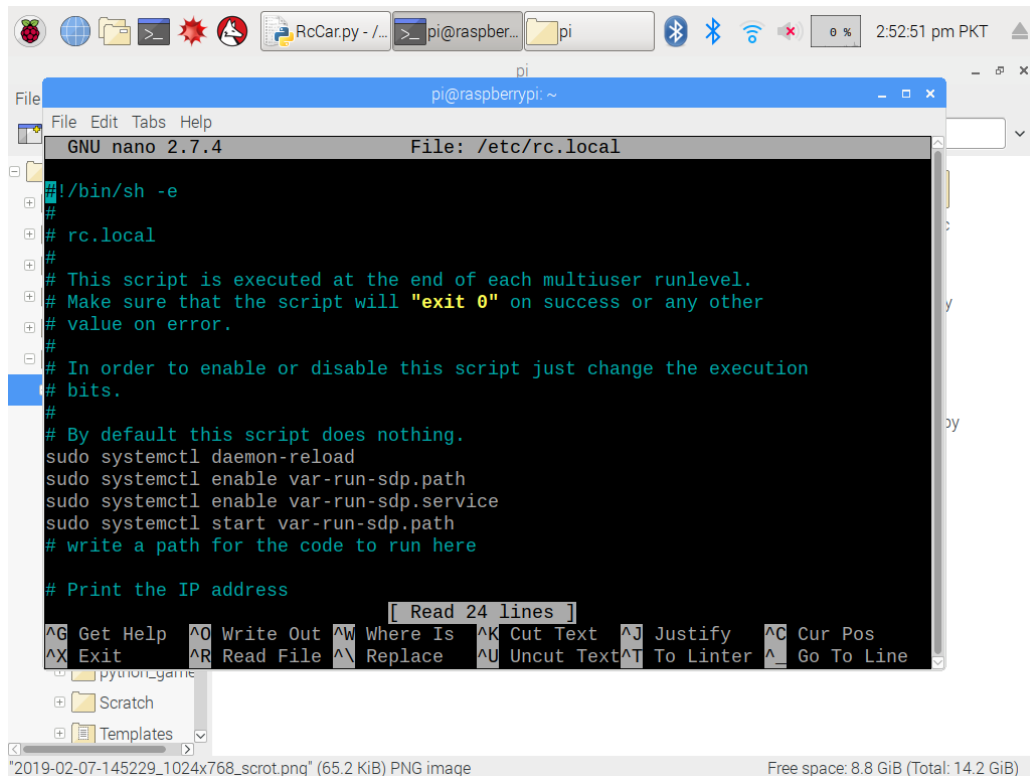
- Open Terminal window.



- Type “**sudo nano /etc/rc.local**” and press enter.



- Following script will appear(image):



- Go to the next line of “# write a path for the code to run here”. Type path as : “sudo python /home/pi/RCar.py &”. And then press **ctrl+x**.

```

File Edit Tabs Help
GNU nano 2.7.4 File: /etc/rc.local Modified
GP#
GP# By default this script does nothing.
GPsudo systemctl daemon-reload
GPsudo systemctl enable var-run-sdp.path
Mo sudo systemctl enable var-run-sdp.service
Mo sudo systemctl start var-run-sdp.path
en # write a path for the code to run here
en
Mo sudo python /home/pi/RCar.py &
Mo
Mo# Print the IP address
en_IP=$(hostname -I) || true
GP if [ "$_IP" ]; then
GP printf "My IP address is %s\n" "$_IP"
GP
GP exit 0
GP
GP
GP
GP
GP Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
GP Exit ^R Read File ^N Replace ^U Uncut Text ^T To Linter ^_ Go To Line
GPIO.output(MotorL2,False)
GPIO.output(MotorR1,False)
GPIO.output(MotorR2,False)
Ln: 7 Col: 0

```

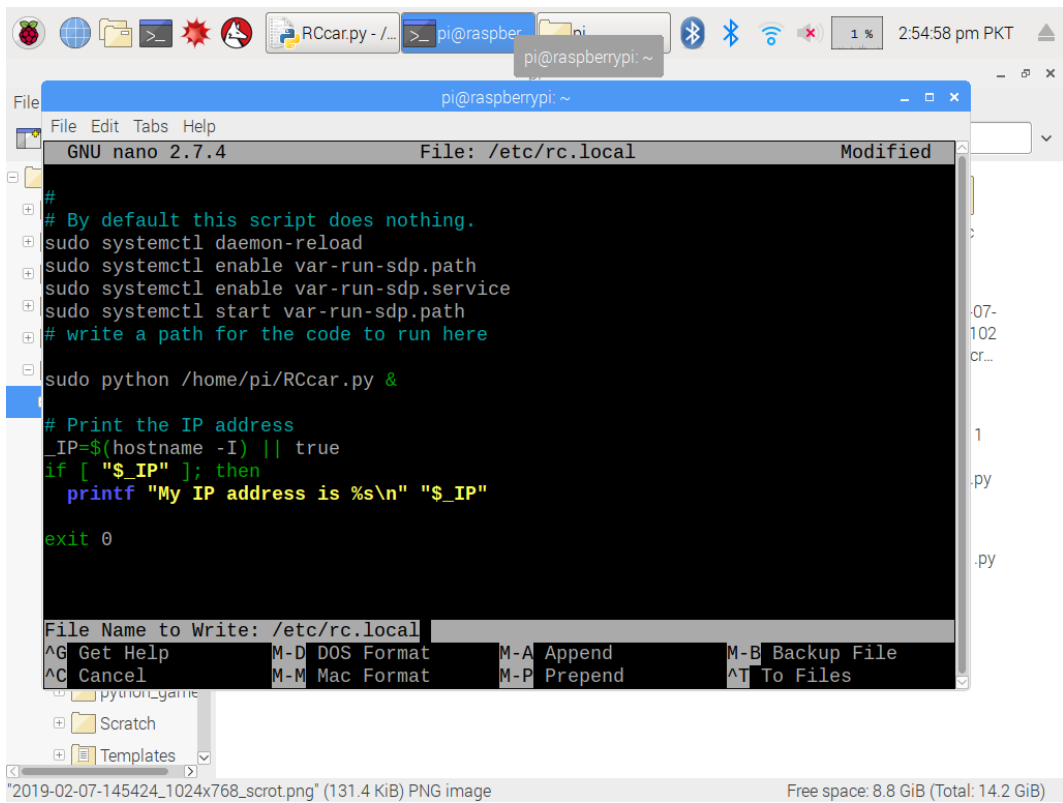
- Press **ctrl+s** to save it.

```

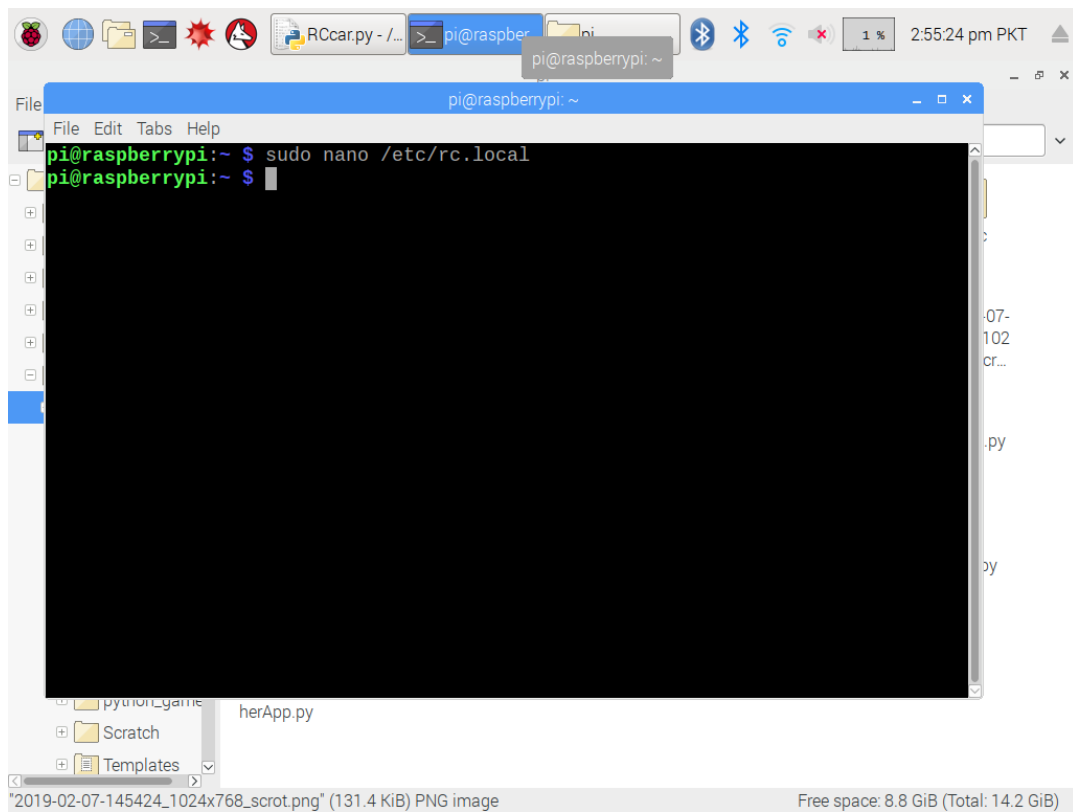
File Edit Tabs Help
GNU nano 2.7.4 File: /etc/rc.local Modified
#
# By default this script does nothing.
sudo systemctl daemon-reload
sudo systemctl enable var-run-sdp.path
sudo systemctl enable var-run-sdp.service
sudo systemctl start var-run-sdp.path
# write a path for the code to run here
sudo python /home/pi/RCar.py &
# Print the IP address
_IP=$(hostname -I) || true
if [ "$_IP" ]; then
printf "My IP address is %s\n" "$_IP"
exit 0
Save modified buffer? (Answering "No" will DISCARD changes.)
Y Yes
N No ^C Cancel
python_game
Scratch
Templates
'2019-02-07-145424_1024x768_scrout.png' (131.4 KiB) PNG image
Free space: 8.8 GiB (Total: 14.2 GiB)

```

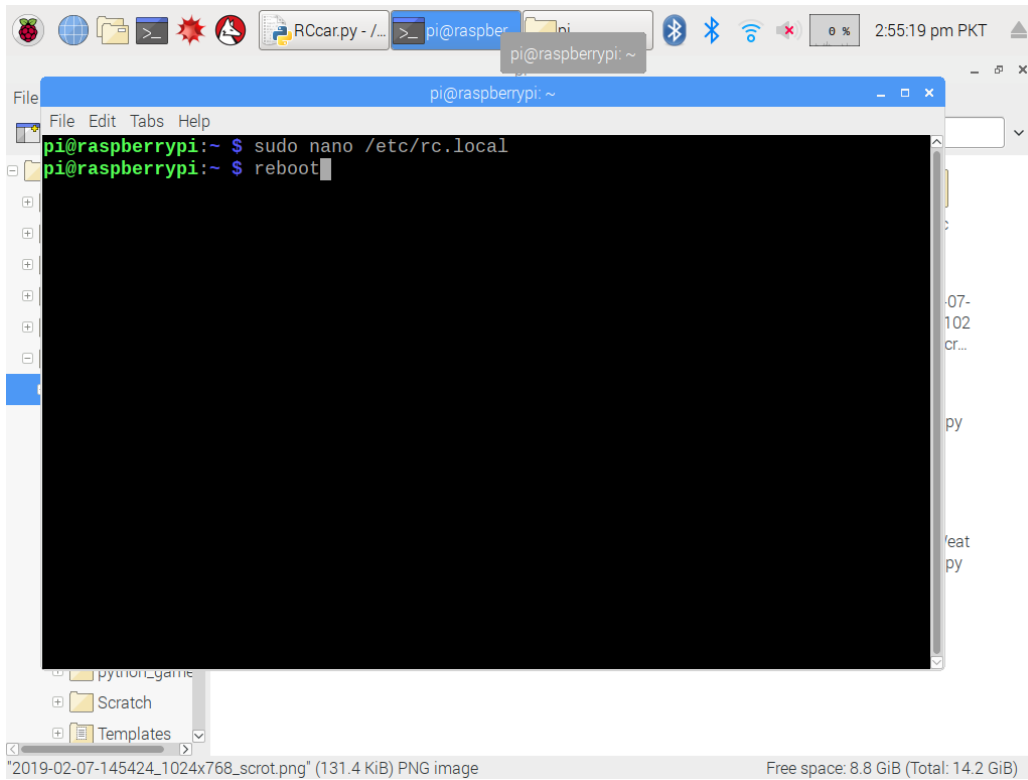
- Press enter.



- Then you see terminal window.



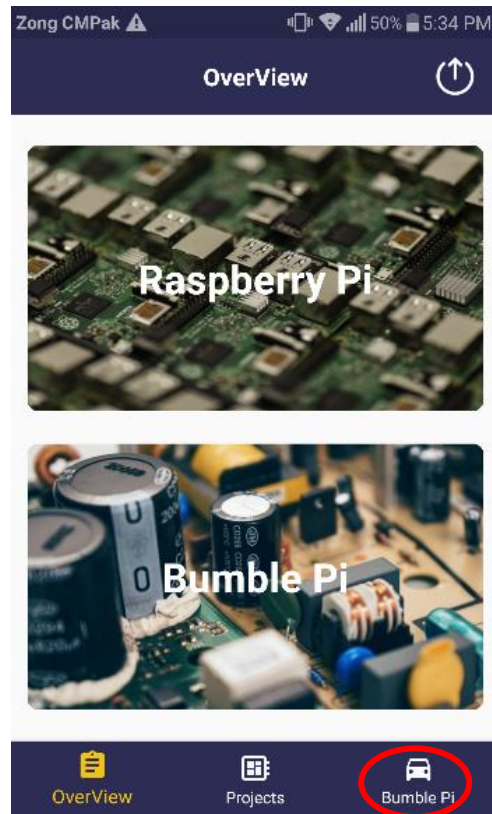
- Then reboot your raspberrypi. Type “**reboot**” then press **enter** and remove hdmi cable and connect motors to bumblePi shield.



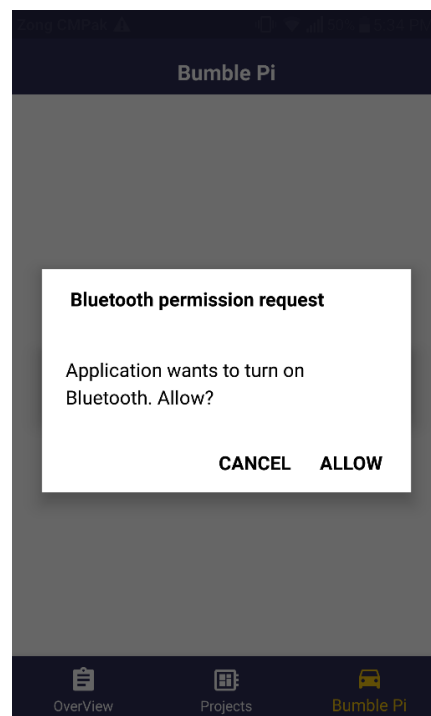


#### Step 4 (Connect BumblePi with Mobile App):

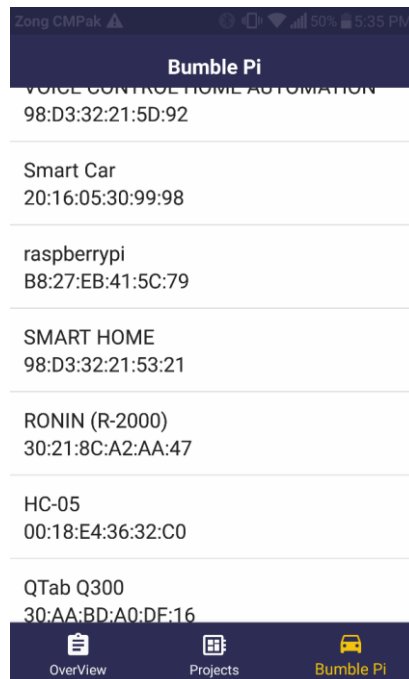
- Open TechTree BumblePi Application and Select “**Bumble Pi**”.



- Select **Allow** to turn on Bluetooth.



- After a while paired Bluetooth devices names appear on screen and then select “raspberrypi” device.



- Car Controlling screen will appear and the **Blue LED** on your bumblepi shield will turn off it means your Bluetooth connection is successful now you can control your car from your smartphone.  
If **BlueLED** doesn't turn off it means you're not connected with raspberrypi so reboot your raspberrypi by turn off its switch and then repeat from step 4.

