

MobileRobot-Openloopcontrol

' Aim:

To develop a python control code to move the mobilerobot along the predefined path.

' Equipments Required:

1. RoboMaster EP core
2. Python 3.7

' Procedure

Step1:

Start the program

Step2:

Import the robo master library to use in built function.

Step3:

Declare variables where x,y,z are linear , side and angular movements respectively.adjust the rgb led ratio.

Step4:

Take the required measurements for the movement. Execute it.

Step5:

End the program.

' Program

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```
from robomaster import robot
import time
from robomaster import camera

if __name__ == '__main__':
    ep_robot = robot.Robot()
    ep_robot.initialize(conn_type="ap")

    ep_chassis = ep_robot.chassis
    ep_led = ep_robot.led
    ep_camera = ep_robot.camera

    print("Video streaming started.....")
    ep_camera.start_video_stream(display=True, resolution = camera.STREAM_360P)

    ep_chassis.move(x=2.5, y=0, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=255,g=255,b=255,effect="on")

    ep_chassis.move(x=0.5, y=0, z=85, xy_speed=1).wait_for_completed()
    ep_led.set_led(comp = "all",r=255,g=0,b=0,effect="on")

    ep_chassis.move(x=0.70, y=0, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=0,g=255,b=0,effect="on")

    ep_chassis.move(x=0.35, y=0, z=90, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=0,g=255,b=255,effect="on")

    ep_chassis.move(x=1.4, y=0, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=255,g=101,b=0,effect="on")

    ep_chassis.move(x=0, y=0, z=-40, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=0,g=0,b=128,effect="on")

    ep_chassis.move(x=1.63, y=0, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=128,g=0,b=128,effect="on")

    ep_chassis.move(x=0, y=0, z=143, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=0,g=51,b=102,effect="on")

    ep_chassis.move(x=0, y=1.55, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=153,g=51,b=102,effect="on")

    ep_chassis.move(x=2, y=0, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=0,g=128,b=128,effect="on")

    ep_chassis.move(x=0, y=0, z=82, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=225,g=0,b=225,effect="on")

    ep_chassis.move(x=0.6, y=0, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=204,g=204,b=225,effect="on")

    ep_chassis.move(x=0, y=0, z=0, xy_speed=1.3).wait_for_completed()
    ep_led.set_led(comp = "all",r=225,g=225,b=225,effect="on")

    time.sleep(4)
    ep_camera.stop_video_stream()
```

```
print("Stopped video streaming.....")
```

```
ep_robot.close()
```

' MobileRobot Movement Image:







’ MobileRobot Movement Video:

<https://youtu.be/OHQbHli6aLU>

’ Result:

Thus the python program code is developed to move the mobilerobot in the predefined path.

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