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:

Use from robomaster import robot

Step2:

Choose the x,y,z - axis movement distance(meters).

Step3:

Give ep_chassis.move to move straight.

Step4:

Give time.sleep() for a break.

Step5:

Give ep_led.set_led() to use different colours of led

Program

```
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=2.8,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=255,g=204,b=0,effect="on")

ep_chassis.move(x=0,y=0,z=50,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=153,g=51,b=102,effect="on")

ep_chassis.move(x=0.6,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=255,g=204,b=0,effect="on")

ep_chassis.move(x=0,y=0,z=55,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=153,g=51,b=102,effect="on")

ep_chassis.move(x=0.6,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=255,g=204,b=0,effect="on")

ep_chassis.move(x=0,y=0,z=62,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=0,g=0,b=255,effect="on")

ep_chassis.move(x=1.5,y=0,z=0,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,y=0,z=-28,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=0,g=255,b=0,effect="on")

ep_chassis.move(x=1.3,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=102,g=0,b=102,effect="on")

ep_chassis.move(x=0,y=0,z=40,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=255,g=0,b=255,effect="on")

ep_chassis.move(x=1.5,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=0,g=255,b=255,effect="on")

ep_chassis.move(x=0,y=0,z=90,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=0,g=128,b=0,effect="on")

ep_chassis.move(x=1.8,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=0,g=0,b=128,effect="on")

ep_chassis.move(x=0,y=0,z=55,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=0,g=255,b=255,effect="on")

ep_chassis.move(x=0.5,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=0,g=204,b=255,effect="on")
```

```
ep_chassis.move(x=0,y=0,z=30,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=51,g=102,b=255,effect="on")

ep_chassis.move(x=0.5,y=0,z=0,xy_speed=1).wait_for_completed()
ep_led.set_led(comp = "all",r=204,g=204,b=255,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/LpNgazyLxsg

Result:

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

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