

```
//This organized the app and places the files in the teamcode section.  
//This would be important if you wanted to do some more complicated  
//programming and wanted access to a environment such as Android Studio.
```

```
package org.firstinspires.ftc.teamcode;
```

```
//These next few statements add specific coding to this class so that you  
//can access the build-in methods of these other classes.
```

```
import com.qualcomm.robotcore.eventloop.opmode.LinearOpMode;  
import com.qualcomm.robotcore.eventloop.opmode.TeleOp;  
import com.qualcomm.robotcore.hardware.DcMotor;
```

```
//This section is important because it determines how to organize  
//the class within the context of the robot driver station app on the phone.  
//It is normal to get nervous during competition and it is also common to launch  
//wrong program when stressed. It is usually best to have a single opMode for  
//teleOp as you can't make the wrong choice if there is only a single choice.
```

```
@TeleOp(name = "Whatever", group = "Intermediate")
```

```
//@Disabled
```

```
public class Rookie_With_Camera extends LinearOpMode {
```

```
//These statements create instances of the motor class so that you  
//can control the motors.
```

```
public DcMotor driveFR = null;
```

```
public DcMotor driveBR = null;
```

```
public DcMotor driveFL = null;
public DcMotor driveBL = null;

public void runOpMode() {

    //mapping software objects to hardware objects through
    //configuration file.
    //The left and right is based on observing
    //the robot from above and facing the forward direction.

    //Your robot can be configured so that you could start working right away.
    //the left motor goes into the 0 motor port. It is called driveLeft
    //in the configuration file.
    //the right motor goes into the 1 motor port. It is called driveRight
    //in the configuration file.

    //Using conventions makes it easier to operate your robot. Some
    //teams prefer more language, such as motorDriveLeft. In this case,
    //I kept things simple for you so that you can focus your time and
    //energy in getting up to speed with the robot.

    driveFR = hardwareMap.get(DcMotor.class, "driveFR");
    driveBR = hardwareMap.get(DcMotor.class, "driveBR");
    driveFL = hardwareMap.get(DcMotor.class, "driveFL");
    driveBL = hardwareMap.get(DcMotor.class, "driveBL");

    waitForStart();
```

```
double power=.25;

//driveStrafeRight(power);
//sleep(3500);
//driveAxialForward(power);
//sleep(5500);
//driveStrafeLeft(power);
//sleep(4000);
//driveAxialBackward(power);
//sleep(1000);
//RotateRight(power);
//sleep(750);
//driveStrafeLeft(power);
//sleep(1000);
//driveAxialForward(power);
//sleep(2000);

//driveAllStop();

while (opModelsActive()) {
    if(gamepad1.dpad_up){
        driveAxialForward(power);
    }
    else if(gamepad1.dpad_down){
        driveAxialBackward(power);
    }
    else if(gamepad1.dpad_left){
```

```

        driveStrafeLeft(power);
    }
    else if(gamepad1.dpad_right){
        driveStrafeRight(power);
    }
    else if(gamepad1.left_bumper){
        driveRotateLeft(power);
    }
    else if(gamepad1.right_bumper){
        driveRotateRight(power);
    }
    else
    {
        driveAllStop();
    }
}

//This next section contains examples of methods. This is to inspire
//you to want to learn more about programming and Java specifically.

//When driving forward, the left motor is positive and the right motor
//is negative. Motors generally rotate counter clockwise, so the left
//motor spins in the correct direction to go forward.
//The right motor would spin in the opposite direction, cause the
//robot to spin. This is the desired behavior for other situations
//but not this one.
//The right motor is set to - power, which rotates it in the opposite
//direction.

```

//All of the other movements can be derived from this observations.

```
public void driveAxialForward(double power) {
    driveFR.setPower(-power);
    driveBR.setPower(power);

    driveFL.setPower(power);
    driveBL.setPower(-power);
}
public void driveAxialBackward(double power) {
    driveFR.setPower(power);
    driveBR.setPower(-power);

    driveFL.setPower(-power);
    driveBL.setPower(power);
}
public void driveRotateLeft(double power) {
    driveFR.setPower(power);
    driveBR.setPower(-power);

    driveFL.setPower(power);
    driveBL.setPower(-power);
}
public void driveRotateRight(double power) {
    driveFR.setPower(-power);
    driveBR.setPower(power);
    driveFL.setPower(-power);
```

```
        driveBL.setPower(power);
    }
    public void driveStrafeLeft(double power) {
        driveFR.setPower(power);
        driveBR.setPower(power);
        driveFL.setPower(power);
        driveBL.setPower(power);
    }
    public void driveStrafeRight(double power) {
        driveFR.setPower(-power);
        driveBR.setPower(-power);
        driveFL.setPower(-power);
        driveBL.setPower(-power);
    }
    public void driveAllStop() {
        //driveLeft.setPower(0);
        driveFR.setPower(0);
        driveBR.setPower(0);
        driveFL.setPower(0);
        driveBL.setPower(0);
    }
}
```