Let's Talk Tank Drive

BASIC INSTRUCTIONS FOR DISPLAYING THE CODE USED FOR BOTH ONE AND TWO STICK TANK DRIVE

TANK DRIVE USING 1 JOYSTICK

Tank Drive operates the robot like a tank with only four directional options.

1. Forward
2. Backward
3. Left turn
4. Right turn

In this program, the robot is controlled with a single joystick. Moving the joystick forward or backward causes the robot to move in the same direction, while moving it left or right causes the robot to turn in the corresponding direction.

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

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

@TeleOp(name="Main", group="Example");

public class Teleop extends LinearOpMode {
    @Override
    public void init() {
        DcMotor motorFrontLeft = hardwareMap.dcMotor.get("motorFrontLeft");
        DcMotor motorBackLeft = hardwareMap.dcMotor.get("motorBackLeft");
        DcMotor motorFrontRight = hardwareMap.dcMotor.get("motorFrontRight");
        DcMotor motorBackRight = hardwareMap.dcMotor.get("motorBackRight");

        // Reverse the right side motors.
        // This may be wrong for your setup.
        // If your robot moves backwards when commanded to go forwards,
        // reverse the left side instead.
        // See the note about this earlier on this page.
        motorFrontRight.setDirection(DcMotorSimple.Direction.REVERSE);
        motorBackRight.setDirection(DcMotorSimple.Direction.REVERSE);
        telemetry.addData("--> ", "ready.");
    }

    @Override
    public void init_loop() {
    }

    @Override
    public void start() {
        telemetry.addData("--> ", "go!");
    }

    @Override
    public void loop() {
        if (gamepad1.left_stick_x > 0) {
            // turn right
            motorFrontLeft.setPower(gamepad1.left_stick_x);
            motorBackLeft.setPower(gamepad1.left_stick_x);
        }

        else if (gamepad1.left_stick_x < 0) {
            motorFrontRight.setPower(gamepad1.left_stick_x);
            motorBackRight.setPower(gamepad1.left_stick_x);
        }
        else {
            motorFrontLeft.setPower(gamepad1.left_stick_y);
            motorBackLeft.setPower(gamepad1.left_stick_y);
            motorFrontRight.setPower(gamepad1.left_stick_y);
            motorBackRight.setPower(gamepad1.left_stick_y);
        }

    }

    @Override
    public void stop() {
    }
}
```

TANK DRIVE USING 2 JOYSTICKS

Tank Drive operates the robot like a tank with only four directional options.

1. Forward
2. Backward
3. Left turn
4. Right turn

In this program, the robot is controlled using two joysticks. Moving both joysticks forward makes the robot move forward, and moving them both backward makes the robot move backward. To turn the robot, move only one joystick.

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

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

@TeleOp(name="Main", group="Example");

public class Teleop extends LinearOpMode {
    @Override
    public void init() {
        DcMotor motorFrontLeft = hardwareMap.dcMotor.get("motorFrontLeft");
        DcMotor motorBackLeft = hardwareMap.dcMotor.get("motorBackLeft");
        DcMotor motorFrontRight = hardwareMap.dcMotor.get("motorFrontRight");
        DcMotor motorBackRight = hardwareMap.dcMotor.get("motorBackRight");

        // Reverse the right side motors.
        // This may be wrong for your setup.
        // If your robot moves backwards when commanded to go forwards,
        // reverse the left side instead.
        // See the note about this earlier on this page.
        motorFrontRight.setDirection(DcMotorSimple.Direction.REVERSE);
        motorBackRight.setDirection(DcMotorSimple.Direction.REVERSE);
        telemetry.addData("--> ", "ready.");
    }

    @Override
    public void init_loop() {
    }

    @Override
    public void start() {
        telemetry.addData("--> ", "go!");
    }

    @Override
    public void loop() {
        motorFrontLeft.setPower(gamepad1.left_stick_y);
        motorBackLeft.setPower(gamepad1.left_stick_y);
        motorFrontRight.setPower(gamepad1.right_stick_y);
        motorBackRight.setPower(gamepad1.right_stick_y);


    }

    @Override
    public void stop() {
    }
}
```