# Differential Drive

It is most basic drive, which consists of set of wheels that can be driven independently.

## Components required:

### ( while using adapter)

- Chassis
- Two wheels
- One caster wheel
- Two DC motors
- Single strand and multi strand wires of appropriate length
- Two 3 way switches or Two 2 way switches and two push button
- Multi-meter
- Power supply

### (without using adapter)

- All of the above +
- PCB(dot)
- Four Diodes (eg.-D1N4007)
- One electrolytic capacitor (~1000 microfarad)
- Step down transformer (220v- 12V AC)
- Two plastic boxes to encase transformer and for control box

- Plug for transformer
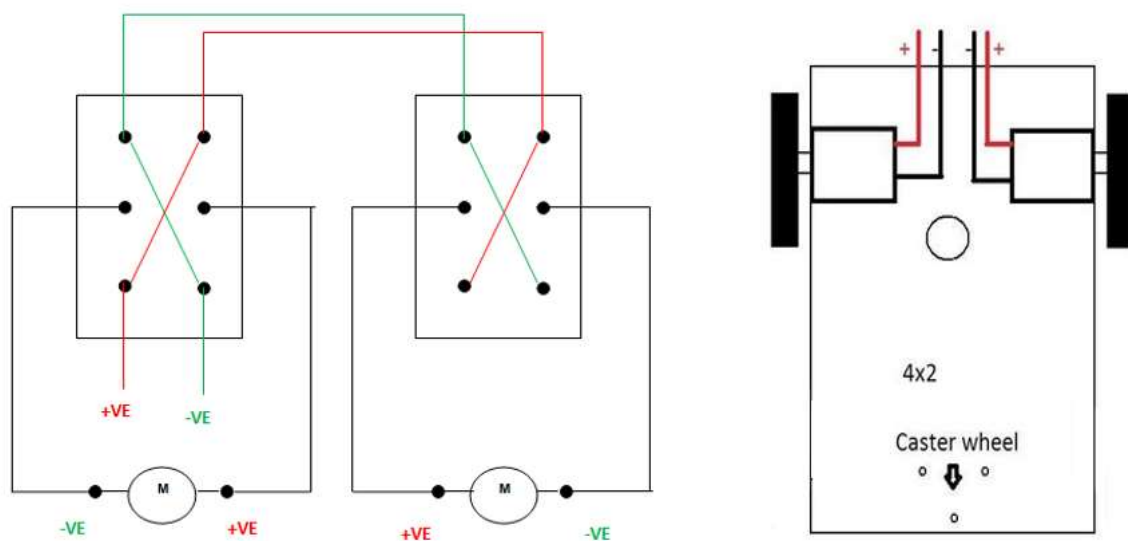- IC 7805 (To convert 12V into 5V)
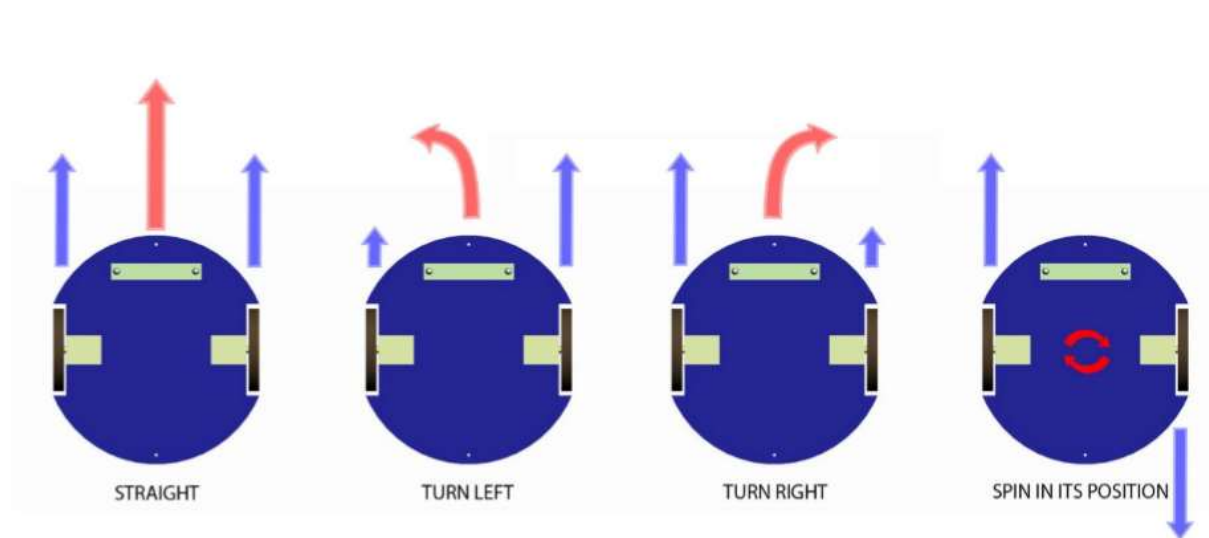
# 3 way switches (DPDT switches)



# DRIVE MECHANISM

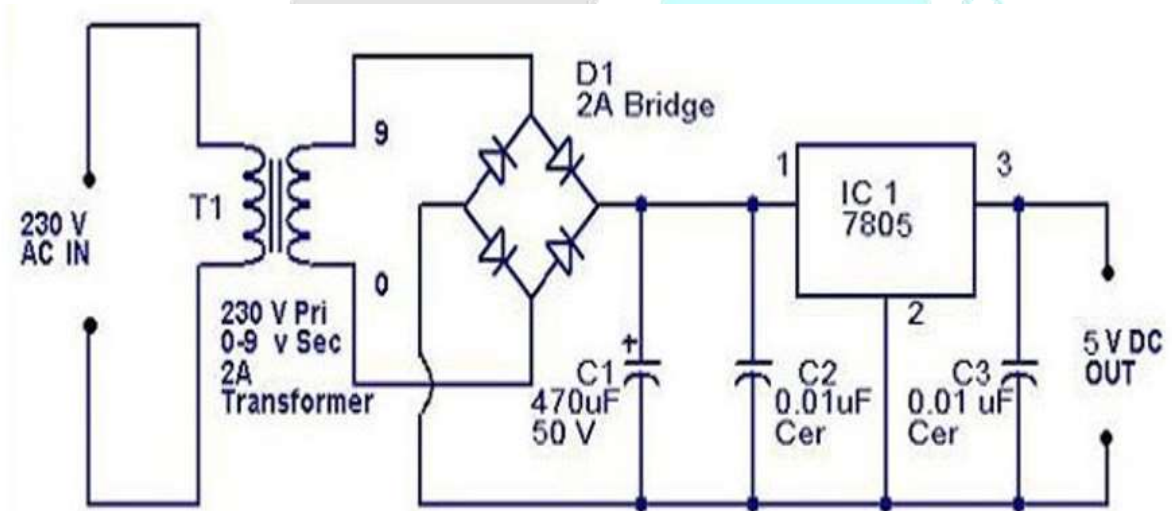The basic chassis design and the mechanism and logic according to which the robot moves is called a drive mechanism

# Differential Drive Circuit (using DPDT)

Motion of the bot



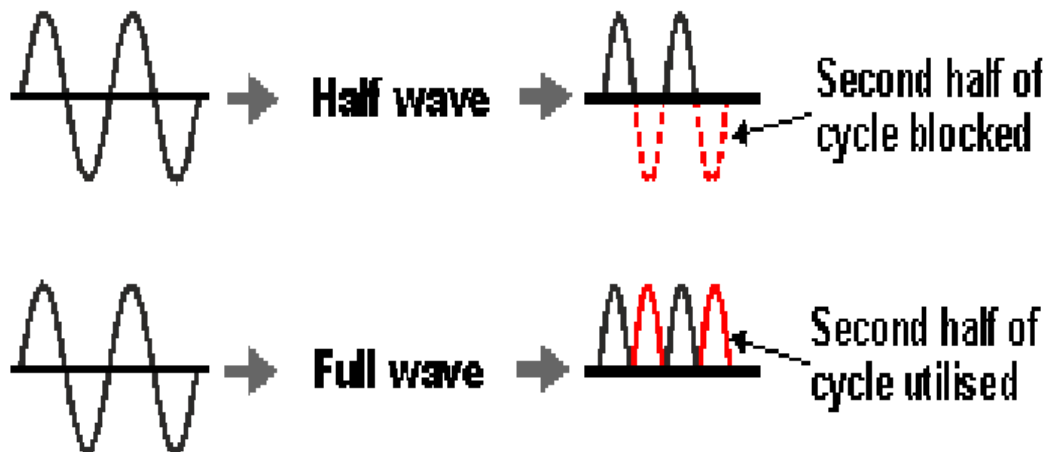STRAIGHT | TURN LEFT | TURN RIGHT | SPIN IN ITS POSITION
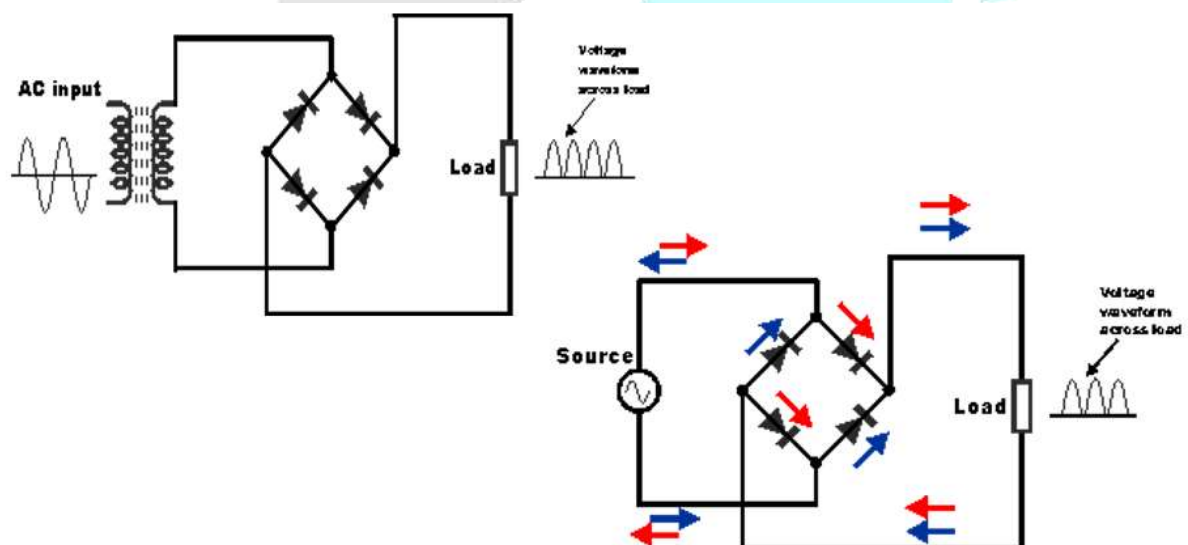
Rectifier Circuit:

Types of Rectifier Circuit

1) Half Wave Rectifier

2) Full Wave Rectifier



Bridge Rectifier Circuit

# Other types of differential drives

Skid–Steer Drive                          Omni Drive



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