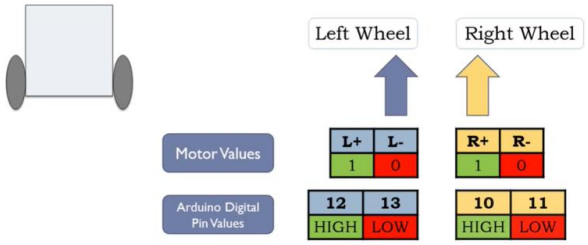
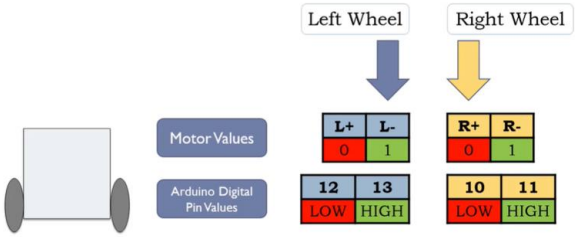
movements theory contd.

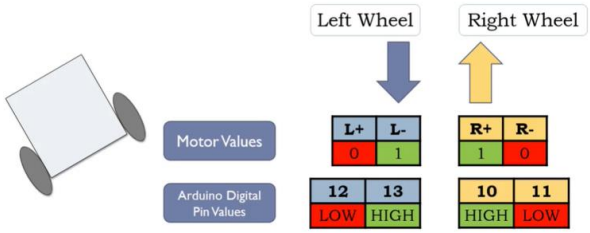
FORWARD -



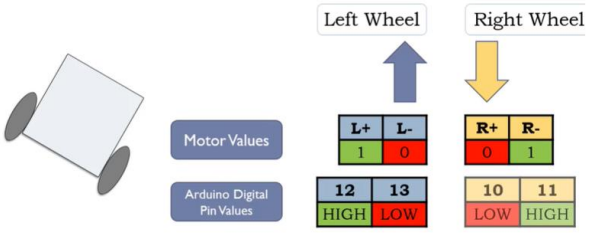
BACKWARD –



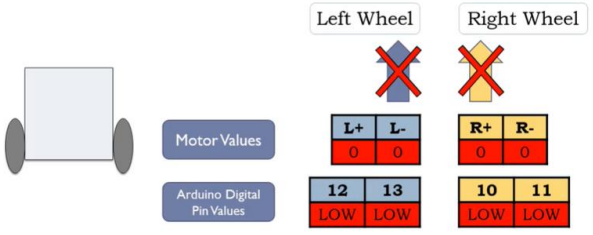
LEFT –



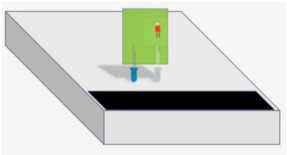
RIGHT –



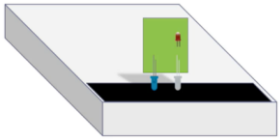
STOP –



Black Line Detection Using IR Sensor –



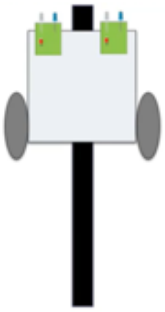
CASE 1: Sensor on light colored surface -> light reflected from surface -> no black line detected -> sensor LED = ON -> analog value > 600D



CASE 2: Sensor on black line -> no reflection of light -> black line detected -> sensor LED = OFF -> analog value < 100

Moving along the black line -

Case1 - Default case – Robot on the line -> move forward



Case2 – right sensor will encounter black line first-> take right turn to align itself with the black line again (OR) Right sensor detecting a black line and left not detecting one -> indicates that the line has taken a right curve

Case3 – Similarly, for left

Case4 – when both the sensors detect a line, T junction is detected - > STOP