3.2. Arduino Working Logic

Thus totally the microcontroller gets 4 inputs from the sensor circuitry, to the (A3 – A0) of Arduino to decide what to do when on the line. Below is the complete description about what each input mean and what needs to be done [4].

Table 1: Arduino Working Logic

Input				Output (PWM)		State In	Action
A0	A1	A2	A3	9	10		
1	0	0	1	255	255	All sensor in position	Go straight
1	0	0	0	255	191	Rightmost sensor is on track.	Move right
1	1	0	0	255	127	Two sensor from the left is out of track	Turn right
1	1	1	0	255	64	Three sensor from the left is out of Track	Sharp turn right
0	0	0	1	191	255	Leftmost sensor is on track	Move left
0	0	1	1	127	255	Two sensor from the right is out of track	Turn left
0	1	1	1	64	255	Three sensor from the left is out of Track	Sharp turn left
1	1	1	1	0	255	All sensor is out of track	Go back Until track is detected