## Algorithm for Robot Locomotion

Algorithm: Pseudo Code for Robot Locomotion

1. int trig1, trig2, trig3;
2. int echo1, echo2, echo3;
3. **function** ULTRASONIC (trig, echo)
4. trig(LOW);
5. delay(2); // delay in microseconds
6. trig(HIGH);
7. delay(2); // delay in microseconds
8. trig(LOW);
9. delay(2); // delay in microseconds
10. time = **pulseIn** (echo, HIGH);
11. distance = (time\*0.034/2);
12. **return** distance
13. **function end**
14. **function** MOTORS\_PWM (LF, LB, RF, LB)
15. Left\_Side\_Motors\_Forward(LF);
16. Left\_Side\_Motors\_Backward(LB);
17. Right\_Side\_Motors\_Forward(RF);
18. Right\_Side\_Motors\_Backward(LB);
19. **function end**
20. Ultra-one ULTRASONIC (trig1,echo1);
21. Ultra-two ULTRASONIC (trig2,echo2);
22. Ultra-three ULTRASONIC (trig3, echo3);
23. **if** ((Ultra-one <= 100) && (Ultra-two <= 100) && (Ultra-three <= 100)) // 100cm
24. {
25. MOTORS\_PWM (0, 255, 0, 255);
26. print("GO BACK");
27. }
28. **else if** ((Ultra-one <= 100) && (Ultra-two <= 100))
29. {
30. MOTORS\_PWM (255, 0, 100, 0);
31. print("RIGHT TURN");
32. }
33. **else if** ((Ultra-two <= 100) && (Ultra-three <= 100))
34. {
35. MOTORS\_PWM (100, 0, 255, 0);
36. print("LEFT TURN");
37. }
38. **else if** (Ultra-one <= 100)
39. {
40. MOTORS\_PWM (255, 0, 100, 0);
41. print("RIGHT TURN");
42. }
43. **else if** (Ultra-two <= 100)
44. {
45. MOTORS\_PWM (0, 255, 0, 255)
46. print("GO BACK");
47. }
48. **else if** (Ultra-three <= 100)
49. {
50. MOTORS\_PWM (100, 0, 255, 0);
51. print("GO BACK");
52. }
53. **else**
54. {
55. MOTORS\_PWM (255, 0, 255, 0);
56. print("GO BACK");
57. }