phase5.py > SimulatedRobot > move_forward

```python
class SimulatedRobot:
    def __init__(self):
        self.direction = "stopped"
    def get_distance(self):
        # Simulates ultrasonic sensor values (10 to 100 cm)
        return random.uniform(5.0, 100.0)
    def move_forward(self):
        self.direction = "forward"
        print("🚗 Moving forward...")
    def turn_left(self):
        self.direction = "left"
        print("↩️ Turning left...")
    def turn_right(self):
        self.direction = "right"
        print("↪️ Turning right...")
    def stop(self):
        self.direction = "stopped"
        print("🛑 Stopped.")
    def run(self, runtime=10):
        start_time = time.time()
        while time.time() - start_time < runtime:
            distance = self.get_distance()
            print(f"[Sensor] Distance to object: {distance:.2f} cm")
            if distance > 30:
                self.move_forward()
            elif 15 < distance <= 30:
                self.turn_left()
            else:
                self.turn_right()
```

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```
3   class SimulatedRobot:
21      def run(self, runtime=10):
31                  self.turn_right()
32
33              time.sleep(1)
34
35          self.stop()
36
37  # Run the simulation
38  if __name__ == "__main__":
39      bot = SimulatedRobot()
40      bot.run(runtime=15)
41
```