#include <Servo.h>

Servo gate; // Servo motor for the gate

int sensor1 = 2; // Sensor at one side of the track

int sensor2 = 3; // Sensor at the other side of the track

int ledRed = 4; // Red signal LED

int ledGreen = 5; // Green signal LED

void setup() {

pinMode(sensor1, INPUT);

pinMode(sensor2, INPUT);

pinMode(ledRed, OUTPUT);

pinMode(ledGreen, OUTPUT);

gate.attach(6); // Servo connected to pin 6

gate.write(90); // Keep gate open initially

digitalWrite(ledGreen, HIGH);

digitalWrite(ledRed, LOW);

}

void loop() {

if (digitalRead(sensor1) == HIGH) { // Train is approaching

digitalWrite(ledRed, HIGH);

digitalWrite(ledGreen, LOW);

gate.write(0); // Close gate

delay(5000); // Delay for train passage

}

if (digitalRead(sensor2) == HIGH) { // Train has passed

gate.write(90); // Open gate

digitalWrite(ledRed, LOW);

digitalWrite(ledGreen, HIGH);

}

}