```
int enA = 10;      // Enable A
int in1 = 9;       // IN1
int in2 = 8;       // IN2
int in3 = 7;       // IN3
int in4 = 6;       // IN4
int enB = 5;       // Enable B
int leftIR = A0;   // Left side IR sensor
int rightIR = A1;  // Right side IR sensor

int forwardSpeed = 200;  // Set normal forward speed
int highTurnSpeed = 220; // Slightly higher speed for active motor during
turns
int lowTurnSpeed = 150;  // Lower speed for the passive motor during
turnsvoid

setup() {
 pinMode(enA, OUTPUT);
 pinMode(in1, OUTPUT);
 pinMode(in2, OUTPUT);
 pinMode(in3, OUTPUT);
 pinMode(in4, OUTPUT);
```

```
pinMode(enB, OUTPUT);

pinMode(leftIR, INPUT);
 pinMode(rightIR, INPUT);
}

void loop() {
int leftValue = digitalRead(leftIR);
 int rightValue = digitalRead(rightIR);

  if (leftValue == LOW && rightValue == HIGH) {
 // Right turn: slow left motor, higher speed on right motor
analogWrite(enA, lowTurnSpeed);
analogWrite(enB, highTurnSpeed);
moveRight();
}
 else if (leftValue == HIGH && rightValue == LOW) {
// Left turn: higher speed on left motor, slow right motor
 analogWrite(enA, highTurnSpeed);
analogWrite(enB, lowTurnSpeed);
moveLeft();
}
```

```
else if (leftValue == LOW && rightValue == LOW) {
// Move forward at set speed
analogWrite(enA, forwardSpeed);
analogWrite(enB, forwardSpeed);
moveForward();
}
 else {
stopMotors();
}
}
void moveForward() {
digitalWrite(in1, HIGH);
digitalWrite(in2, LOW);
digitalWrite(in3, LOW);
digitalWrite(in4, HIGH);
}

void moveLeft() {
digitalWrite(in1, LOW); // Left motor forward
digitalWrite(in2, HIGH);
digitalWrite(in3, LOW);  // Right motor off
digitalWrite(in4, LOW);}
```

```
void moveRight() {
digitalWrite(in1, LOW); // Left motor off
digitalWrite(in2, LOW);
digitalWrite(in3, HIGH); // Right motor forward
digitalWrite(in4, LOW);
}

void stopMotors()
{
digitalWrite(in1, LOW);
digitalWrite(in2, LOW);
digitalWrite(in3, LOW);
digitalWrite(in4, LOW);
}
```