DEVELOPING TRAFFIC

CONTOL MANAGEMENT.

Connected and Autonomous Vehicles (CAVs)

- **Connected Vehicles (CVs)**:

- **V2V Communication**:

    Connected vehicles can communicate with other nearby vehicles using Vehicle-to-Vehicle (V2V) communication. This enables sharing of real-time data on vehicle position, speed, and status, improving safety and   traffic management.

- **V2I Communication**:

    Vehicles can also communicate with infrastructure, such as traffic lights and road sensors, through Vehicle-to-Infrastructure (V2I) communication. This allows for traffic signal prioritization and data exchange, reducing congestion and enhancing efficiency.

- **Wireless Networks**:

    CVs connect to the internet and other vehicles through wireless networks, allowing for real-time data exchange and remote updates.

PROGRAM FOR CONNECTED AND AUTONOMOUS VEHICLES USIN HTML:

```html
<!DOCTYPE html>
<html>
<head>
  <style>
    .road {
      width: 600px;
      height: 400px;
      border: 1px solid #000;
      position: relative;
    }
    .vehicle {
      width: 50px;
      height: 30px;
      background-color: #0074d9;
```

```html
 position: absolute;        }
   </style>
</head>
<body>
   <div class="road">
      <div class="vehicle" id="car"></div>
   </div>

   <script>
      const car = document.getElementById("car");
      let carPosition = 0;
      let carSpeed = 2;

      function moveCar() {
         carPosition += carSpeed;
         car.style.left = carPosition + "px";
```

```
if (carPosition > 550) {
        carSpeed = -2;
    } else if (carPosition < 0) {
        carSpeed = 2;
    }

    requestAnimationFrame(moveCar);
}

moveCar();  // Start the car's motion
</script>
</body>
</html>
```

When you open this HTML file in a web browser, you'll see the blue car moving left and right along the road.

This example demonstrates basic animation and positioning using HTML, CSS, and JavaScript but doesn't represent the complexity of a real connected and autonomous vehicle system, which involves sensors, decision-making algorithms, and interactions with the environment and other vehicles.

THANK YOU!!!