```html
<!DOCTYPE html>
<html lang="ms">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Wira Tatabahasa: Hingga vs Sampai</title>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/p5.js/1.4.0/p5.js"></script>
    <script src="https://unpkg.com/ml5@latest/dist/ml5.min.js"></script>
    <style>
        body { font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif; text-align: center; background-color: #f0f4f8; margin: 0; padding: 20px; }
        canvas { border-radius: 20px; box-shadow: 0 15px 35px rgba(0,0,0,0.2); background-color: #fff; }
        .header { background: #2c3e50; color: white; padding: 15px; border-radius: 15px; margin-bottom: 20px; }
        .instruksi { font-size: 1.1em; margin-bottom: 10px; color: #34495e; }
        #status { font-weight: bold; color: #e67e22; }
        .score-board { font-size: 1.5em; font-weight: bold; color: #2980b9; margin-top: 10px; }
    </style>
</head>
<body>

    <div class="header">
        <h1>✍️ WIRA TATABAHASA</h1>
        <p>Latihan Kata Sendi Nama: <b>Hingga</b> atau <b>Sampai</b>?</p>
    </div>

    <div class="instruksi">
        ⬅️ Condong KIRI: <b>Hingga (A)</b> | Condong KANAN: <b>Sampai (B)</b> ➡️
```

```html
    <p id="status">Sila tunggu, AI sedang bersedia...</p>
  </div>


  <div id="canvas-container"></div>
  <div id="score" class="score-board">Markah: 0 / 15</div>


<script>
let video;

let poseNet;

let noseX = 0;

let score = 0;

let currentIndex = 0;

let feedback = "Sedia, Wira?";

let feedbackColor = "#2c3e50";

let gameActive = false;

let modelLoaded = false;


// Data Soalan (A = Hingga, B = Sampai)

const soalanLatihan = [

    { s: "1. Abang nak tengok televisyen _____ pukul berapa ni?", jaw: "B" },

    { s: "2. Pasukan bola sepak SK Gemilang mara _____ ke separuh akhir.", jaw: "A" },

    { s: "3. Operasi perpustakaan dari pukul 8 pagi _____ 5 petang.", jaw: "A" },

    { s: "4. Penatnya lari, rasa macam _____ tak cukup nafas!", jaw: "B" },

    { s: "5. Projek dijangka siap dari bulan Mac _____ bulan Ogos.", jaw: "A" },

    { s: "6. Adik ketawa terbahak-bahak _____ keluar air mata.", jaw: "A" },

    { s: "7. Belajar _____ peringkat Ijazah Sarjana Muda.", jaw: "A" },

    { s: "8. Jangan main basikal di luar _____ senja.", jaw: "B" },

    { s: "9. Telur dibiarkan di dalam bekas _____ menetas.", jaw: "A" },
```

```
    { s: "10. Baca dari muka surat pertama _____ muka surat terakhir.", jaw: "A" },

    { s: "11. Asyik main permainan video _____ lupa makan nasi.", jaw: "B" },

    { s: "12. Keretapi menghubungkan KL _____ sempadan negara.", jaw: "A" },

    { s: "13. Lama bersiap, saya tunggu dekat luar _____ tertidur.", jaw: "B" },

    { s: "14. Mesyuarat berlanjutan _____ pukul 1:00 petang.", jaw: "A" },

    { s: "15. Pegawai terpaksa berjaga _____ pagi semalam.", jaw: "A" }
];


function setup() {
    let canvas = createCanvas(640, 480);

    canvas.parent('canvas-container');

    video = createCapture(VIDEO);

    video.size(width, height);

    video.hide();


    poseNet = ml5.poseNet(video, () => {

        modelLoaded = true;

        gameActive = true;

        document.getElementById('status').innerText = "AI SEDIA! Gerakkan kepala anda ke kiri
atau kanan.";

    });


    poseNet.on('pose', (results) => {

        if (results.length > 0) {

            noseX = results[0].pose.keypoints[0].position.x;

        }

    });
}
```

```
function draw() {

    // Paparan Kamera (Diterbalikkan untuk Mirror Effect)

    push();

    translate(width, 0);

    scale(-1, 1);

    image(video, 0, 0, width, height);


    // Kawasan Sensor (Visualizer)

    noStroke();

    fill(46, 204, 113, 80); // Hijau Kiri

    rect(width-150, 0, 150, height);

    fill(231, 76, 60, 80); // Merah Kanan

    rect(0, 0, 150, height);

    pop();


    if (gameActive && currentIndex < soalanLatihan.length) {

        let data = soalanLatihan[currentIndex];


        // Papan Soalan

        fill(255, 255, 255, 220);

        stroke(44, 62, 80);

        strokeWeight(3);

        rect(50, 50, width - 100, 140, 15);


        // Teks Soalan

        noStroke();

        fill(0);
```

```
    textAlign(CENTER);

    textSize(20);

    textWrap(WORD);

    text(data.s, width/2, 100, width - 120);


    // Pilihan Jawapan

    textSize(18);

    text(" ⬅ KIRI: HINGGA | KANAN: SAMPAI ➡ ", width/2, 170);


    // Logik Kawanan (Nose Tracking)

    // NoseX < 200 (Kanan Skrin/Kiri User) | NoseX > 440 (Kiri Skrin/Kanan User)

    if (noseX < 200) {

        prosesJawapan("A");

    } else if (noseX > 440) {

        prosesJawapan("B");

    }


    // Maklum Balas

    fill(feedbackColor);

    textSize(26);

    text(feedback, width/2, height - 50);

  } else if (currentIndex >= soalanLatihan.length) {

    tamatPermainan();

  }

}


function prosesJawapan(pilihan) {

  let betul = soalanLatihan[currentIndex].jaw;
```

```javascript
    gameActive = false; // Henti sekejap input

    if (pilihan === betul) {

        score++;

        feedback = " ✅ TEPAT SEKALI!";

        feedbackColor = "#27ae60";

        document.getElementById('score').innerText = "Markah: " + score + " / 15";

    } else {

        feedback = " ❌ KURANG TEPAT!";

        feedbackColor = "#c0392b";

    }

    setTimeout(() => {

        currentIndex++;

        if (currentIndex < soalanLatihan.length) {

            gameActive = true;

            feedback = "Sedia untuk soalan seterusnya...";

            feedbackColor = "#2c3e50";

        }

    }, 2000);

}

function tamatPermainan() {

    fill(255);

    rect(0, 0, width, height);

    fill(44, 62, 80);

    textAlign(CENTER);

    textSize(40);
```

```
    text("TAHNIAH, WIRA!", width/2, height/2 - 50);

    textSize(25);

    text("Markah Akhir: " + score + " / 15", width/2, height/2 + 10);


    textSize(16);

    let tip = score > 10 ? "Hebat! Anda faham perbezaan Hingga & Sampai." : "Teruskan
berlatih! Hingga (masa/had), Sampai (tempat/tahap).";

    text(tip, width/2, height/2 + 60);
}
</script>
</body>
</html>
```