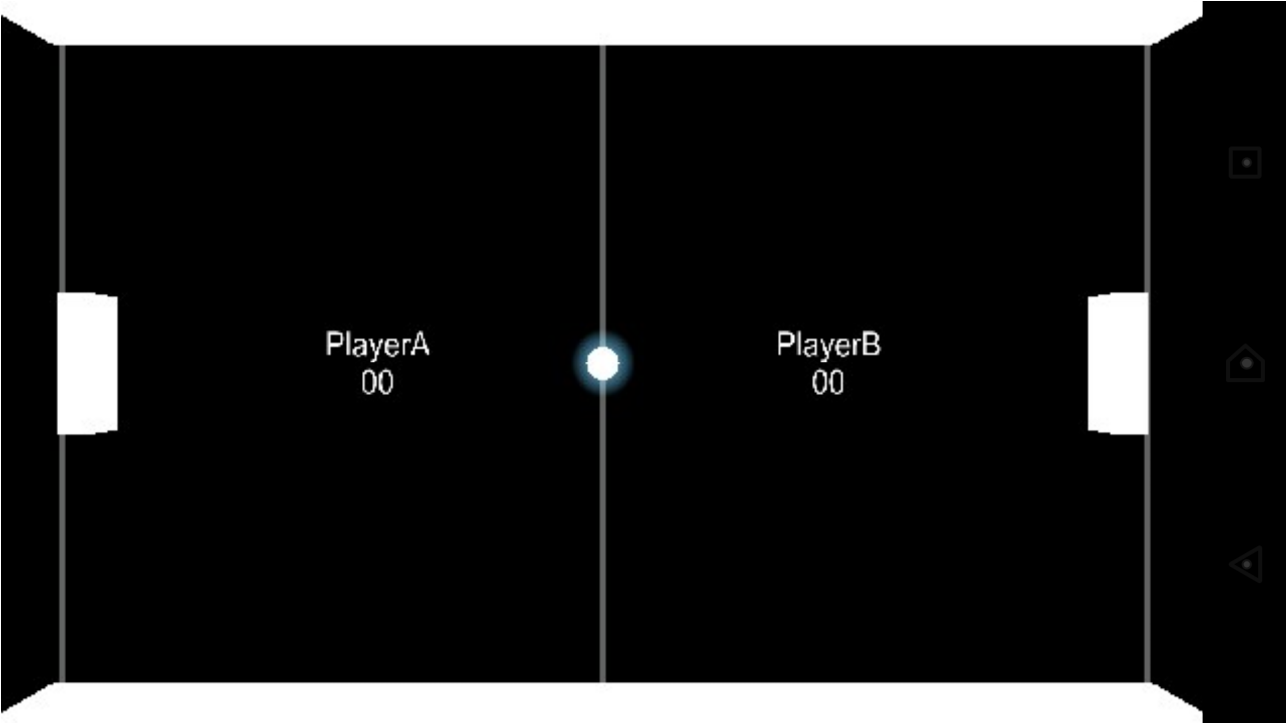
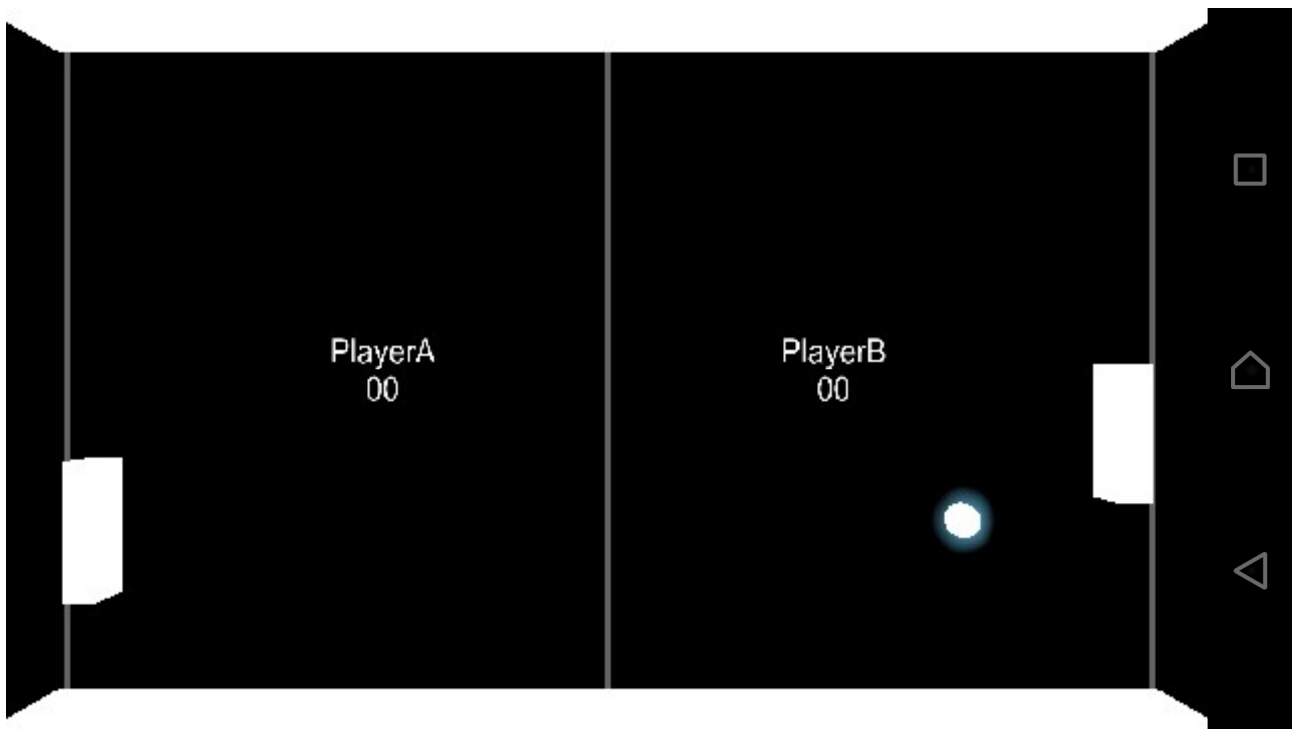


PONG





Script del menu

```
using UnityEngine;
using System.Collections;

public class EscullPlayers : MonoBehaviour {

    public float natW = 3996f;
    public float natH = 2160f;
    public float rx;
    public float ry;

    public GUIStyle botons;

    void OnGUI() {

        rx = Screen.width / natW;
        ry = Screen.height / natH;

        GUI.matrix = Matrix4x4.TRS(Vector3.zero, Quaternion.identity, new Vector3(rx, ry,
1));

        if (GUI.Button(new Rect(natW / 2 - 1000, natH / 2 - 500, 500, 1000), "1 PLAYER",
botons)) {

            Application.LoadLevel("pong1player");

        }

        if (GUI.Button(new Rect(natW / 2 + 500, natH / 2 - 500, 500, 1000), "2 PLAYER",
botons)) {

            Application.LoadLevel("pong2players");

        }

    }
}
```

Script de la bola

```
using UnityEngine;
using System.Collections;

public class Ball : MonoBehaviour {

    // Contantes
    private const float startSpeed = 5f;           // Velocidad inicial por defecto
    public Vector3 speed;                          // Velocidad de la pelota

    // Variables
    private uint st, nextSt;                       // Control de la mini maquina de estados

    public static Vector3 startPos;

    public static GameObject bola;

    public GameObject rightPlayer;
    public GameObject leftPlayer;

    // Use this for initialization
    void Start () {

        // Estado inicial de la maquina
        st = nextSt = 0;

        // Inicializa la velocidad
        speed = Vector3.zero;
        speed.x = speed.y = startSpeed;

        startPos = this.transform.position;

        bola = this.gameObject;
    }

    // Update is called once per frame
    void Update () {

        switch (st) {

            case 0: // Espera a que se pulse espacio, si se pulsa inicializa el juego
                if (Input.simulateMouseWithTouches) nextSt = 1;
                break;

            case 1: // Estado normal de juego, si sale por alguno de los limites,
reincia                this.transform.Translate(speed * Time.deltaTime); // Mueve la pelota
                if (this.transform.position.x < -10f) {
                    this.transform.position = Vector3.zero; // Posicion al centro
                    speed.x = speed.y = startSpeed; // Velocidad inicial
                    HUD_puntuació.puntsB += 1f;
                    nextSt = 0; // Cambio de estado
                }

                if (this.transform.position.x > 10f) {

                    this.transform.position = Vector3.zero; // Posicion al centro
                    speed.x = speed.y = startSpeed; // Velocidad inicial
                    HUD_puntuació.puntsA += 1f;
                    nextSt = 0; // Cambio de estado
                }
            }
        }
    }
}
```

```

        }
        break;

    default:
        break;

}

// Aplica el cambio de estado
st = nextSt;

}

// Si colisionas con algo...
void OnTriggerEnter(Collider other) {

    if (other.name == "ceiling") { // Si tocas el techo, velocidad Y en
negativo
        speed.y = -startSpeed;
    } else if (other.name == "floor") { // Si tocas el suelo, velocidad Y en
positivo
        speed.y = startSpeed;
    } else if (other.name == "rightPlayer") { // Si tocas el player derecho,
velocidad X en negativo
        speed.x = -startSpeed;
        if (rightPlayer.transform.localScale.y/2 > 0f) speed.y = startSpeed;
        if (rightPlayer.transform.localScale.y/2 < 0f) speed.y = -startSpeed;
    } else if (other.name == "leftPlayer") { // Si tocas el player izquierdo,
velocidad X en positivo
        speed.x = startSpeed;
        if (leftPlayer.transform.localScale.y/2 > 0f) speed.y = startSpeed;
        if (leftPlayer.transform.localScale.y/2 < 0f) speed.y = -startSpeed;
    }

}

}
}

```

Script de la IA

```

using UnityEngine;
using System.Collections;

public class IA : MonoBehaviour {

    // Variables
    //private GameObject ballObject = null; // Copia de la bola
    private Ball ballScript = null; // Copia del script de la bola
    private const float speed = 3.9f; // Velocidad de la pala

    private GameObject ceiling, floor; // Copia de los objetos del decorado
    private float top, bottom; // Limites de movimiento

    public GameObject target;

    private Vector3 startPos;

    // Use this for initialization
    void Start () {

```

```

// Busca a la bola
target = GameObject.Find("ball") as GameObject;
if (!target) Debug.Log("Objeto 'ball' no encontrado.");
// Busca el componente Script
ballScript = target.GetComponent<Ball>();
if (!ballScript) Debug.Log("Componente 'Ball.cs' no encontrado.");

// Busca los elementos del decorado
ceil = GameObject.Find("ceil") as GameObject;
if (!ceil) Debug.LogError("Objeto 'ceil' no encontrado.");
floor = GameObject.Find("floor") as GameObject;
if (!floor) Debug.LogError("Objeto 'floor' no encontrado.");

// Calcula los limites
top = ceil.transform.position.y - (ceil.transform.localScale.y / 2f) -
(this.transform.localScale.y / 2);
bottom = floor.transform.position.y + (floor.transform.localScale.y / 2f) +
(this.transform.localScale.y / 2);

startPos = this.transform.position;
}

// Update is called once per frame
void Update() {
    Vector3 move = Vector3.zero;

    if (this.transform.position.y < target.transform.position.y) {
        this.transform.Translate(speed * Vector3.up * Time.deltaTime);
    }

    if (this.transform.position.y > target.transform.position.y) {
        this.transform.Translate(speed * Vector3.down * Time.deltaTime);
    }

    //Aplica el movimiento a la pala
    this.transform.Translate(move * Time.deltaTime);

    // Limites de movimiento
    Vector3 pos = this.transform.position;
    if (this.transform.position.y > top) pos.y = top;
    if (this.transform.position.y < bottom) pos.y = bottom;
    this.transform.position = pos;

    if (Ball.bola.transform.position.x >= 9f) {
        this.transform.position = startPos;
    }

    if (Ball.bola.transform.position.x <= -9f) {
        this.transform.position = startPos;
    }
}
}
}

```

Script de les pales

```
using UnityEngine;
using System.Collections;

public class Player : MonoBehaviour {

    private const float speed = 5f;           // Velocidad de la pala
    private GameObject ceil, floor;         // Copia de los objetos del decorado
    private float top, bottom;             // Limites de movimiento

    private Vector3 startPos;

    public static bool guanyatB = false;
    public static bool guanyatA = false;

    // Use this for initialization
    void Start () {

        // Busca los elementos del decorado
        ceil = GameObject.Find("ceil") as GameObject;
        if (!ceil) Debug.LogError("Objeto 'ceil' no encontrado.");
        floor = GameObject.Find("floor") as GameObject;
        if (!floor) Debug.LogError("Objeto 'floor' no encontrado.");

        // Calcula los limites
        top = ceil.transform.position.y - (ceil.transform.localScale.y / 2f) -
(this.transform.localScale.y / 2);
        bottom = floor.transform.position.y + (floor.transform.localScale.y / 2f +
(this.transform.localScale.y / 2));

        startPos = this.transform.position;
    }

    // Update is called once per frame
    void Update() {

        // Variable de movimiento
        Vector3 move = Vector3.zero;

        ( // Segun las teclas pulsadas...
        if (Input.GetKey(KeyCode.UpArrow)) move.y = speed;
        if (Input.GetKey(KeyCode.DownArrow)) move.y = -speed; ) ---> Canviar per android

        // Aplica el movimiento
        this.transform.Translate(move * Time.deltaTime);

        // Limites de movimiento
        Vector3 pos = this.transform.position;
        if (this.transform.position.y > top) pos.y = top;
        if (this.transform.position.y < bottom) pos.y = bottom;
        this.transform.position = pos;

        if (Ball.bola.transform.position.x >= 9f) {

            this.transform.position = startPos;

        }

        if (Ball.bola.transform.position.x <= -9f) {
```

```

        this.transform.position = startPos;
    }
}

```

Script puntuació

```

using UnityEngine;
using System.Collections;

public class HUD_puntuació : MonoBehaviour {

    public float natW = 3996f;
    public float natH = 2160f;
    public float rx;
    public float ry;

    public GameObject bola;
    public GUIStyle puntuacio;

    public static float puntsA = 0f;
    public static float puntsB = 0f;

    void OnGUI() {

        rx = Screen.width / natW;
        ry = Screen.height / natH;

        GUI.matrix = Matrix4x4.TRS(Vector3.zero, Quaternion.identity, new Vector3(rx, ry,
1));

        if ((puntsA <= 9f) && (puntsB <= 9f)){

            GUI.Label(new Rect(natW/2-1000, natH/2-500, 500, 1000), "PlayerA\n" +
puntsA.ToString("00"), puntuacio);
            GUI.Label(new Rect(natW/2+500, natH/2-500, 500, 1000), "PlayerB\n" +
puntsB.ToString("00"), puntuacio);

        }

        if (puntsA == 10f) {

            GUI.Label(new Rect(natW / 2 - 1200, natH / 2 - 500, 1000, 1000), "PlayerA\n" +
"HAS GUANYAT", puntuacio);

        }

        if (puntsB == 10f) {

            GUI.Label(new Rect(natW / 2 + 350, natH / 2 - 500, 1000, 1000), "PlayerB\n" +
"HAS GUANYAT", puntuacio);

        }

    }
}

```