

## #5-05ソースコード

### MainCtrl.cs

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class MainCtrl : MonoBehaviour {

    enum GAMEMODE {
        TITLE,
        PLAY,
        END
    };

    GAMEMODE nowmode;

    public Transform titleInfoGroup;
    public Player player;
    public Transform goalMarker;

    // Use this for initialization
    void Start() {
        nowmode = GAMEMODE.TITLE;
        titleInfoGroup.gameObject.SetActive(true);
        player.IsStop = true;
    }

    // Update is called once per frame
    void Update() {
        switch (nowmode) {
            case GAMEMODE.TITLE:
                //titleモードのときにこのプログラムが動く
                if (Input.GetButtonDown("Jump")) {
                    nowmode = GAMEMODE.PLAY;
                    //タイトルロゴなどを消す
                    titleInfoGroup.gameObject.SetActive(false);
                    //プレイヤーを動かす
                    player.IsStop = false;
                }
                break;

            case GAMEMODE.PLAY:
                if(player.transform.position.x > goalMarker.position.x) {
                    player.IsStop = true;
                    nowmode = GAMEMODE.END;
                }
                break;

            case GAMEMODE.END:
                break;
        }
    }
}
```

### Player.cs

```

using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class Player : MonoBehaviour {
    int score;          //スコア

    public UnityEngine.UI.Text scoreValue;

    float downSpeed;    //落下速度
    Rigidbody2D rb;      //物理演算コンポーネント
    Animator animCtrl;   //アニメーションコントロール
    AudioSource audioSource; //オーディオコンポーネント

    public AudioClip[] sounds;

    public bool IsStop;

    // Use this for initialization
    void Start() { //初期化处理
        rb = GetComponent<Rigidbody2D>();
        animCtrl = GetComponent<Animator>();
        downSpeed = 0;
        score = 0;
        scoreValue.text = score.ToString(); //スコアの表示
        audioSource = GetComponent<AudioSource>();
        IsStop = true;
        animCtrl.SetBool("IsIdle", true);
    }

    // Update is called once per frame
    void Update() {
        if (IsStop) return;
        RaycastHit2D hit;
        //下方向チェック
        hit = Physics2D.Raycast(transform.position + new Vector3(-0.32f, -0.32f), Vector2.right,
0.64f);
        if (hit.transform != null) {
            downSpeed = 0; //すぐ下がってめり込んでしまうのに対処
            animCtrl.SetBool("IsGround", true);
            if (Input.GetButtonDown("Jump")) { //ジャンプのボタン判定
                downSpeed = 6.5f;
                transform.Translate(Vector3.up * 0.01f); //ジャンプしてもRaycastに引っかかってしまう対策
                audioSource.PlayOneShot(sounds[0]);
            }
        } else {
            animCtrl.SetBool("IsGround", false);
            downSpeed += -0.3f; //落下速度をどんどん早くする
        }

        hit = Physics2D.Raycast(transform.position + new Vector3(0.34f, 0.26f), Vector2.down,
0.52f);
        if (hit.transform != null) {
            //障害物に当たった
            animCtrl.SetBool("IsIdle", true);
        } else {
            //障害物に当たっていない
            animCtrl.SetBool("IsIdle", false);
        }
    }
}

```

```
Vector2 nowpos = rb.position;
nowpos += new Vector2(1, downSpeed) * Time.deltaTime;
rb.MovePosition(nowpos);

animCtrl.SetFloat("DownSpeed", downSpeed);
}

private void OnTriggerEnter2D(Collider2D collision) {
    collision.gameObject.SetActive(false);
    score += 1;      //スコア1点加算
    scoreValue.text = score.ToString(); //スコアの表示
    audioSource.PlayOneShot(sounds[1]);
}
}
```