Proyecto final de la materia "Programación"

"Tetris"

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ISC03A

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Variable Declarations

```
private float tiempoanterior;

private float tiempocaida = 0.8f;

public static int alto = 20;

public static int ancho = 10;

public Vector3 puntorotacion;

private static Transform[,] grid = new Transform[ancho, alto];
```

Float: Prmitive data type that holds floating values up to 7 digits

Staric: used to declare a special type of a variable or a function inside or outside of a class.

Game Inputs(Up, Down, Left, Right)

```csharp
//Inputs del juego
  void Update()
  {
     if (Input.GetKeyDown(KeyCode.LeftArrow))
     {
        transform.position += new Vector3(-1, 0, 0);
        if (!Limites())
        {
           transform.position -= new Vector3(-1, 0, 0);
        }
     }
     if (Input.GetKeyDown(KeyCode.RightArrow))
     {
        transform.position += new Vector3(1, 0, 0);
        if (!Limites())
        {
           transform.position -= new Vector3(1, 0, 0);
        }
     }
```

Void: You use void as the return type of a method (or a local function) to specify that the method doesn't return a value. You can also use void as a referent type to declare a pointer to an unknown type.
If: Contains a boolean condition followed by a single or multi-line code block to be executed. At runtime, if a boolean condition evaluates to true, then the code block will be executed, otherwise not.

Falling blocks

```
//Programacion de la caida del bloque

    if (Time.time - tiempoanterior > (Input.GetKey(KeyCode.DownArrow) ? tiempocaida / 20 :
tiempocaida))

    {

        transform.position += new Vector3(0, -1, 0);

        if (!Limites())

        {

            transform.position -= new Vector3(0, -1, 0);

            AñadirAlGrid();

            RevisarLineas();


            this.enabled = false;

            FindObjectOfType<LogicaGenerador>().NuevoTetromino();

        }

        tiempoanterior = Time.time;


    }

    if (Input.GetKeyDown(KeyCode.UpArrow))

    {

        transform.RotateAround(transform.TransformPoint(puntorotacion), new Vector3(0, 0, 1), -90);

        if (!Limites())

        {

            transform.RotateAround(transform.TransformPoint(puntorotacion), new Vector3(0, 0, 1), 90);
```

If: Contains a boolean condition followed by a single or multi-line code block to be executed. At runtime, if a boolean condition evaluates to true, then the code block will be executed, otherwise not.
Transform.position: Used to get the Vector3 of the current game object.

Checks if a line has been made

```
void RevisarLineas()

{

    for (int i  = alto -1; i >= 0; i--)

    {

        if (Tienelinea(i))

        {

            Borrarlinea(i);

            Bajarlinea(1);

bool Tienelinea(int i)

{

    for (int j = 0; j < ancho; j++)

    {

        if (grid[j,i] == null)

        {

            return false;

        return true;

}
```

Void: You use void as the return type of a method (or a local function) to specify that the method doesn't return a value. You can also use void as a referent type to declare a pointer to an unknown type.
Bool: Boolean structure type that represents a Boolean value, which can be either true or false.
For: Executes its body while a specified Boolean expression evaluates to true.
If: Contains a boolean condition followed by a single or multi-line code block to be executed. At runtime, if a boolean condition evaluates to true, then the code block will be executed, otherwise not.

If a line has been made, it gets destroyed and the blocks above get sent down.

```
void Borrarlinea(int i)

{

    for (int j = 0; j < ancho; j++)

    {

        Destroy(grid[j, i].gameObject);

        grid[j, i] = null;

    }

}

void Bajarlinea(int i)

{

    for (int y = i; y < alto; y++)

    {

        for (int j = 0; j < ancho; j++)

        {

            if (grid[j, y] != null)

            {

                grid[j, y - 1] = grid[j, y];

                grid[j, y] = null;

                grid[j, y - 1].transform.position -= new Vector3(0, 1, 0);
```

Void: You use void as the return type of a method (or a local function) to specify that the method doesn't return a value. You can also use void as a referent type to declare a pointer to an unknown type.

For: Executes its body while a specified Boolean expression evaluates to true.

If: Contains a boolean condition followed by a single or multi-line code block to be executed. At runtime, if a boolean condition evaluates to true, then the code block will be executed, otherwise not.