

MathFoot

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# Chapter 1

## Hierarchical Index

### 1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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## Chapter 2

# Class Index

### 2.1 Class List

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## Chapter 3

# Class Documentation

### 3.1 GameController Class Reference

Inherits MonoBehaviour.

#### Public Attributes

- GameObject [Player0](#)  
*3D model of the player Juan.*
- GameObject [Player1](#)  
*3D model of the player Marco.*
- GameObject [Player2](#)  
*3D model of the player Andrea.*
- GameObject [Player3](#)  
*3D model of the player Antonio.*
- GUIStyle [bPause](#)  
*GUI style for the pause button.*
- GUIStyle [bPlay](#)  
*GUI style for the play button.*
- GUIStyle [bPrevious](#)  
*GUI style for the back button.*
- GUIStyle [guiProblem](#)  
*GUI style for the problem.*
- GUIStyle [guiButton](#)  
*GUI style for the button with text.*
- GUIStyle [guiLabel](#)  
*GUI style for the labels.*
- GameObject[] [LPlane](#)
- float [TIME\\_MAX](#) = 300  
*The player has five minutes to pass a level.*
- int [PTIME](#) = 60  
*Penalization factor for wrong answer.*

## Static Public Attributes

- static int `CountBalls` = 0  
*Current number of balls.*
- static int `ANS` = 4  
*Answer to the problem.*
- static int `TEST`  
*Kind of question according to the level.*
- static int `correct` = -1  
*Show if an answer was correct.*
- static int `Player` = 3  
*Player id.*
- static int `Level` = 2  
*Difficulty of the game.*
- static string `usersolution`  
*Solution to the problem given by the user.*
- static int `score` = -1  
*Score of the user (in seconds).*
- static bool `ScoreReady` = false  
*The score is ready.*

### 3.1.1 Detailed Description

- It controls the game.
- It creates the numbered balls.
- It generates an arithmetic problem.
- The player loses if he touches an incorrect ball.

### 3.1.2 Member Data Documentation

#### 3.1.2.1 `int GameController.correct = -1` `[static]`

Show if an answer was correct.

- Unanswered (-1).
- Incorrect (0).
- Correct (1).

#### 3.1.2.2 `int GameController.Level = 2` `[static]`

Difficulty of the game.

- Easy (0).
- Medium (1).
- Difficult (2).

### 3.1.2.3 `GameObject [ ] GameControl.LPlane`

List of the planes with the score. When the user completes the level, he can observe, using the pointer, the feedback for each problem.

### 3.1.2.4 `int GameControl.Player = 3 [static]`

Player id.

- Juan (0).
- Marco (1).
- Andrea (2).
- Antonio (3).

### 3.1.2.5 `int GameControl.TEST [static]`

Kind of question according to the level.

- Easy (0): characteristics of numbers.
  - Multiples (0).
  - Pairs (1).
  - Odd (2).
- Medium (1): arithmetic problems.
  - Sums (0).
  - Subtractions (1).
  - Multiplications (2).
  - Divisions (3).
- Difficult (2): complex arithmetic problems.

The documentation for this class was generated from the following file:

- `/Users/proyectoexplicarte/Documents/Apps_Papeles/MathFoot/Assets/Scripts/GameControl.cs`

## 3.2 GameSelector Class Reference

Inherits `MonoBehaviour`.

### Static Public Attributes

- static bool `mode` = false

### 3.2.1 Detailed Description

Selection of the mode for the game.

### 3.2.2 Member Data Documentation

#### 3.2.2.1 `bool GameSelector.mode = false` [static]

Mode:

- False -> Game.
- True -> Tutorial.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/GameSelector.cs

## 3.3 GameTutorial Class Reference

Inherits MonoBehaviour.

### Public Attributes

- GUIStyle [guiLabel](#)  
*GUI Style of the text.*

#### 3.3.1 Detailed Description

Game tutorial. The application displays the explanation of its elements

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/GameTutorial.cs

## 3.4 GroundCollision Class Reference

Inherits MonoBehaviour.

### Public Attributes

- Transform [explosion](#)  
*Explosion of the ball.*

#### 3.4.1 Detailed Description

Check if a ball is in collision with the field. It increases a counter with the number of balls.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/GroundCollision.cs

## 3.5 GroundCollisionStart Class Reference

Inherits MonoBehaviour.

## Public Attributes

- Transform [explosion](#)  
*Explosion animation.*

### 3.5.1 Detailed Description

Check if a ball is in collision with the field in the start scene.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/GroundCollisionStart.cs

## 3.6 HeadCollision Class Reference

Inherits MonoBehaviour.

## Public Attributes

- Transform [explosion](#)  
*Effect of the collision.*

### 3.6.1 Detailed Description

Check if the head of a player touches a ball. It checks if the ball is the correct response.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/HeadCollision.cs

## 3.7 HeadCollisionStart Class Reference

Inherits MonoBehaviour.

## Public Attributes

- Transform [explosion](#)  
*Explosion animation.*

### 3.7.1 Detailed Description

Check if the head of the Avatar is in collision with a ball in the start scene.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/HeadCollisionStart.cs

## 3.8 MainScript Class Reference

Inherits MonoBehaviour.

## Public Attributes

- GUIStyle [iconInfo](#)  
*GUI Style of the credit icon.*
- GUIStyle [iconGame](#)  
*GUI Style of the game icon.*
- GUIStyle [iconExit](#)  
*GUI Style of the exit icon.*
- GUIStyle [iconTutorial](#)  
*GUI Style of the tutorial icon.*
- GUIStyle [credit](#)  
*GUI Style of the credits.*
- GUIStyle [title](#)  
*GUI Style of the title.*

### 3.8.1 Detailed Description

Start scene: Welcome to the game.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/MainScript.cs

## 3.9 MenuScript Class Reference

Inherits MonoBehaviour.

## Public Attributes

- GUIStyle [button](#)  
*GUI Style of the buttons.*
- GUIStyle [title](#)  
*GUI Style of the title.*
- GUIStyle [bBack](#)  
*GUI Style of the button to return.*

## Static Public Attributes

- static bool [isSelected](#)  
*The player is selected.*

### 3.9.1 Detailed Description

Selection of the player and the level of the game.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/MenuScript.cs

## 3.10 MenuSelector Class Reference

Inherits MonoBehaviour.

### Static Public Attributes

- static bool `mode` = false

#### 3.10.1 Detailed Description

Selection of the mode for the menu.

#### 3.10.2 Member Data Documentation

##### 3.10.2.1 bool MenuSelector.mode = false [static]

Mode:

- False -> Game.
- True -> Tutorial.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/MenuSelector.cs

## 3.11 PlaneInterfaz Class Reference

Inherits MonoBehaviour.

### Public Attributes

- bool `OnOver`

*The mouse is on over the game object.*

#### 3.11.1 Detailed Description

Interfaz with the mouse for the game object.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/PlaneInterfaz.cs

## 3.12 PlayerScript Class Reference

Inherits MonoBehaviour.

## Public Attributes

- GameObject [BasePlayer0](#)  
*Base of the player Juan.*
- GameObject [BasePlayer1](#)  
*Base of the player Marco.*
- GameObject [BasePlayer2](#)  
*Base of the player Andrea.*
- GameObject [BasePlayer3](#)  
*Base of the player Antonio.*

### 3.12.1 Detailed Description

Selection of the player.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/PlayerScript.cs

## 3.13 ReadConf Class Reference

### Public Member Functions

- [ReadConf](#) (string path)
- string[] [GetPhrases](#) ()

### Properties

- int [NObjects](#) [get]
- string [Error](#) [get]
- bool [IsOpen](#) [get]

### 3.13.1 Detailed Description

Read a XML file with a set of mathematical phrases.

### 3.13.2 Constructor & Destructor Documentation

#### 3.13.2.1 ReadConf.ReadConf ( string path )

Read a XML file.

### 3.13.3 Member Function Documentation

#### 3.13.3.1 string[] ReadConf.GetPhrases ( )

Get the list of mathematical phrases.



### 3.13.4 Property Documentation

#### 3.13.4.1 string ReadConf.Error [get]

Error message.

#### 3.13.4.2 bool ReadConf.IsOpen [get]

The XML file is open.

#### 3.13.4.3 int ReadConf.NObjects [get]

Number of objects of the XML file.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/ReadConf.cs

## 3.14 ScoreScript Class Reference

Inherits MonoBehaviour.

### Public Attributes

- GUIStyle [guiLabel](#)  
*GUI Style of the labels.*
- GUIStyle [guiButton](#)  
*GUI Style of the buttons.*
- int [NR](#) = 5  
*Number of elements of the register (top elements per level).*

### Static Public Attributes

- static bool [show](#) = false  
*Show the score.*

### 3.14.1 Detailed Description

Show a register with the best scores per level.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/ScoreScript.cs

## 3.15 StartAnimation Class Reference

Inherits MonoBehaviour.

### 3.15.1 Detailed Description

Script to animate the main scene, it creates the set of numbered balls at random positions.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/StartAnimation.cs

## 3.16 TutorialScript Class Reference

Inherits MonoBehaviour.

### Public Attributes

- GUIStyle [guiLabel](#)  
*GUI Style of the text.*

### 3.16.1 Detailed Description

Tutorial mode.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/TutorialScript.cs

## 3.17 WinScript Class Reference

Inherits MonoBehaviour.

### Public Attributes

- GUIStyle [guiButton](#)  
*GUI Style of the buttons.*
- GUIStyle [guiLabel](#)  
*GUI Style of the labels.*
- GUIStyle [guiBox](#)  
*GUI Style of the boxes.*

### 3.17.1 Detailed Description

This script shows a mathematical phrase to the winner.

The documentation for this class was generated from the following file:

- /Users/proyectoexplicarte/Documents/Apps\_Papeles/MathFoot/Assets/Scripts/WinScript.cs

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