

# Multiplayer Stacker

## 1.0

Generated by Doxygen 1.8.10

Tue Oct 6 2015 15:16:41



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# Chapter 1

## Namespace Index

### 1.1 Packages

Here are the packages with brief descriptions (if available):

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## Chapter 2

# Hierarchical Index

### 2.1 Class Hierarchy

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

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## Chapter 3

# Class Index

### 3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">MultiStack.Background</a>	Holds background specific data. . . . .	13
<a href="#">MultiStack.BackgroundManager</a>	Creates the background object at runtime. Selects background from a pool of possible backgrounds. . . . .	13
<a href="#">MultiStack.CameraManager</a>	Attached to the main camera in the Game Scene. Handles camera movement on the y axis. .	14
<a href="#">MultiStack.CameraShake</a>	Handles camera shake on explosion. . . . .	16
<a href="#">MultiStack.CanOnlyPickupOnceModifier</a>	When enabled the player can only pickup a shape once. Once a shape is dropped it is no longer draggable. Invokes <a href="#">MultiStack.ClickHandler.canOnlyClickOnce</a> . . . . .	17
<a href="#">MultiStack.CatchTheShapeModifier</a>	When enabled any newly spawned physics objects are dropped straight away rather than waiting for the player to click on/touch them. . . . .	18
<a href="#">MultiStack.ClickableObject</a>	Attached to all physics objects. Defines if a object is currently being held. Used by <a href="#">MultiStack.↔TurnManager</a> to help decide if a players turn is over. Also used to turn off interaction with object by setting <a href="#">MultiStack.ClickableObject.clickable</a> . . . . .	19
<a href="#">MultiStack.ClickHandler</a>	The main click/drag manager. Handles picking up, dragging, and dropping of physics objects via mouse or touch screen controls. . . . .	20
<a href="#">MultiStack.Cloud</a>	Translates a cloud across the screen based on <a href="#">MultiStack.Cloud.minSpeed</a> and <a href="#">MultiStack.↔Cloud.maxSpeed</a> . . . . .	22
<a href="#">MultiStack.CloudController</a>	Handles creation of clouds. . . . .	23
<a href="#">MultiStack.CloudReturner</a>	Invokes <a href="#">MultiStack.CloudController.PoolCloud</a> when object enters trigger. This is placed at opposite end of the screen to the <a href="#">MultiStack.CloudController</a> . . . . .	24
<a href="#">MultiStack.DataPersistence</a>	Data persistence. Handles saving and loading of height and round data. The highest reached height and round are saved and retrieved from file. . . . .	25
<a href="#">MultiStack.Destroy</a>	Used during the explosion animation to destroy the gameobject on animation end. . . . .	27
<a href="#">MultiStack.ExplosiveObject</a>	Attached to any shape that can be turned into an explosive shape. Handles changing a shapes sprite and exploding. . . . .	28

<a href="#">MultiStack.ExplosiveShapeModifier</a>	
When enabled and conditions met a random shape is turned into an explosive shape. Invokes <a href="#">MultiStack.TurnManager.ChangeShapeToExplosive</a> .	30
<a href="#">MultiStack.FallHandler</a>	
Moves camera position to this position if a physics object enters its trigger. Used to move camera to a falling shape.	31
<a href="#">MultiStack.GameManager</a>	
Controls the game flow. Handles beginning the game, spawning the stage, starting new rounds, and ending the game.	32
<a href="#">MultiStack.GameModifier</a>	
The abstract base class for every game modifier. Game modifiers are applied each round to change how the game is played.	34
<a href="#">MultiStack.GameModifierManager</a>	
Handles game modifiers. These are modifiers applied at the beginning of each round (e.g. low gravity).	36
<a href="#">MultiStack.GameOverHandler</a>	
Invokes <a href="#">MultiStack.GameManager.OnGameOver</a> when a physics object enters trigger.	36
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Handles the displaying of the UI in the event of a game over.	37
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## Chapter 4

# Namespace Documentation

### 4.1 MultiStack Namespace Reference

#### Classes

- struct [Background](#)  
*Holds background specific data.*
- class [BackgroundManager](#)  
*Creates the background object at runtime. Selects background from a pool of possible backgrounds.*
- class [CameraManager](#)  
*Attached to the main camera in the Game Scene. Handles camera movement on the y axis.*
- class [CameraShake](#)  
*Handles camera shake on explosion.*
- class [CanOnlyPickupOnceModifier](#)  
*When enabled the player can only pickup a shape once. Once a shape is dropped it is no longer draggable. Invokes [MultiStack.ClickHandler.canOnlyClickOnce](#)*
- class [CatchTheShapeModifier](#)  
*When enabled any newly spawned physics objects are dropped straight away rather than waiting for the player to click on/touch them.*
- class [ClickableObject](#)  
*Attached to all physics objects. Defines if a object is currently being held. Used by [MultiStack.TurnManager](#) to help decide if a players turn is over. Also used to turn off interaction with object by setting [MultiStack.ClickableObject.clickable](#) ←*
- class [ClickHandler](#)  
*The main click/drag manager. Handles picking up, dragging, and dropping of physics objects via mouse or touch screen controls.*
- class [Cloud](#)  
*Translates a cloud across the screen based on [MultiStack.Cloud.minSpeed](#) and [MultiStack.Cloud.maxSpeed](#).*
- class [CloudController](#)  
*Handles creation of clouds.*
- class [CloudReturner](#)  
*Invokes [MultiStack.CloudController.PoolCloud](#) when object enters trigger. This is placed at opposite end of the screen to the [MultiStack.CloudController](#) .*
- class [DataPersistence](#)  
*Data persistence. Handles saving and loading of height and round data. The highest reached height and round are saved and retrieved from file.*
- class [Destroy](#)  
*Used during the explosion animation to destroy the gameobject on animation end.*
- class [ExplosiveObject](#)

- Attached to any shape that can be turned into an explosive shape. Handles changing a shapes sprite and exploding.*
- class [ExplosiveShapeModifier](#)  
*When enabled and conditions met a random shape is turned into an explosive shape. Invokes [MultiStack.TurnManager.ChangeShapeToExplosive](#).*
  - class **Extensions**  
*useful Extension methods.*
  - class [FallHandler](#)  
*Moves camera position to this position if a physics object enters its trigger. Used to move camera to a falling shape.*
  - class [GameManager](#)  
*Controls the game flow. Handles beginning the game, spawning the stage, starting new rounds, and ending the game.*
  - class [GameModifier](#)  
*The abstract base class for every game modifier. Game modifiers are applied each round to change how the game is played.*
  - class [GameModifierManager](#)  
*Handles game modifiers. These are modifiers applied at the beginning of each round (e.g. low gravity).*
  - class [GameOverHandler](#)  
*Invokes [MultiStack.GameManager.OnGameOver](#) when a physics object enters trigger.*
  - class [GameOverUI](#)  
*Handles the displaying of the UI in the event of a game over.*
  - class [GameText](#)  
*A simple wrapper for the text object.*
  - class [GlassObject](#)  
*Attached to any shape that can be turned into a glass shape. Handles changing a shapes sprite and breaking.*
  - class [GlassShapeModifier](#)  
*When enabled and conditions met a random shape is turned into an glass shape. Invokes [MultiStack.TurnManager.ChangeShapeToGlass](#).*
  - class [GravityModifier](#)  
*When enabled a gravity modifier is applied to all spawned shapes.*
  - class [HeightText](#)  
*The UI for the height shown during the game scene.*
  - class [Highscore](#)  
*The UI for the highest height reached on the Main menu scene.*
  - class [IncreaseShapeSizeWhileHeldModifier](#)  
*When enabled a shapes size increases while being dragged.*
  - class [MainMenu](#)  
*Handles the UI for main menu and number of players select scene.*
  - class [MoveTime](#)  
*Responsible for updating the current players move time.*
  - class [OneShapeModifier](#)  
*When enabled only one shape specified by [MultiStack.OneShapeModifier.shape](#) will be spawned for that round.*
  - class [PlayerBoxPlaced](#)  
*Used during the number of player selection scene. Handles alerting [MultiStack.MainMenu](#) when a box is placed by invoking [MultiStack.MainMenu.PlayerBoxPlaced](#) and [MultiStack.MainMenu.PlayerBoxRemoved](#).*
  - class [PlayerColours](#)  
*Holds the colours for each player.*
  - class [PlayerNumberCount](#)
  - struct [PlayerPhysicsObject](#)  
*A structure defining a physics object.*
  - class [RandomPlayerOrderModifier](#)  
*When enabled the order of players is randomised for this round.*
  - class [ReverseDragModifier](#)

*When enabled drag is reversed e.g. when the player drags the mouse/finger left the shape moves right.*

- class [ScoreData](#)

*Class to store serializable height/round data.*

- class [ShakeyShapesModifier](#)

*When enabled a random offset is added to a dragged shape each timestep.*

- class [ShapeMovementSpeedModifier](#)

*When enabled the drag speed is changed to `MultiStack.ShapeMovementSpeedModifier.shapeMovementSpeed`.*

- class [ShapeSizeModifier](#)

*When enabled all newly spawned shapes size is multiplied by `MultiStack.ShapeSizeModifier.sizeModifier`.*

- class [SpringModifier](#)

*When enabled the shapes are attached to springs when being dragged. This results in a harder to control shape.*

- class [StageSelector](#)

*Used to select a stage for the game. A random stage is selected at the beginning of each game.*

- class [TimeForMoveModifier](#)

*When enabled the time a player has to complete their turn is changed to `MultiStack.TimeForMoveModifier.changed←Time`.*

- class [TurnManager](#)

*Handles player turns and spawning of player physics objects. Manages and maintains a list of spawned physics objects. Also handles applying certain `MultiStack.GameModifier` e.g. when `MultiStack.ExplosiveShapeModifier` is applied, this class will loop through the spawned shape list and convert one shape into an explosive shape.*

- class [UIFlash](#)

*User interface flash. Acts as an overlay for the main menu and gameplay scene.*

- class [Utilities](#)

*Useful methods used by a number of classes.*

## Enumerations

- enum [GameOverType](#) { **ShapeOffScreen**, **TimeUp** }

*Game over type.*

- enum [Shape](#) { **Square**, **Circle**, **Triangle**, **Rectangle**, **Irregular** }

*Physic object shapes.*

## Functions

- delegate void [CallBack](#) ()

*A delegate method used when specific actions occur. For example if this delegate is passed to `MultiStack.Camera←Manager.CallBackOnTargetReached` then it is invoked when the camera reaches its target y position.*

### 4.1.1 Enumeration Type Documentation

#### 4.1.1.1 enum `MultiStack.GameOverType` [strong]

Game over type.

#### 4.1.1.2 enum `MultiStack.Shape` [strong]

Physic object shapes.

## 4.1.2 Function Documentation

### 4.1.2.1 `delegate void MultiStack.CallBack ( )`

A delegate method used when specific actions occur. For example if this delegate is passed to [MultiStack.Camera↔Manager.CallBackOnTargetReached](#) then it is invoked when the camera reaches its target y position.



## Chapter 5

# Class Documentation

### 5.1 MultiStack.Background Struct Reference

Holds background specific data.

#### Public Attributes

- GameObject [backgroundPrefab](#)  
*The main background prefab.*
- GameObject [backgroundTilePrefab](#)  
*The prefab used to extend current background in the positive y axis.*

#### 5.1.1 Detailed Description

Holds background specific data.

#### 5.1.2 Member Data Documentation

##### 5.1.2.1 GameObject MultiStack.Background.backgroundPrefab

The main background prefab.

##### 5.1.2.2 GameObject MultiStack.Background.backgroundTilePrefab

The prefab used to extend current background in the positive y axis.

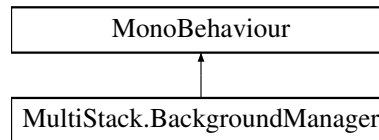
The documentation for this struct was generated from the following file:

- MultiplayerStacker/Scripts/Environment/Background/Background.cs

### 5.2 MultiStack.BackgroundManager Class Reference

Creates the background object at runtime. Selects background from a pool of possible backgrounds.

Inheritance diagram for MultiStack.BackgroundManager:



## Public Attributes

- [Background\[\] backgrounds](#)  
The possible background objects.

### 5.2.1 Detailed Description

Creates the background object at runtime. Selects background from a pool of possible backgrounds.

### 5.2.2 Member Data Documentation

#### 5.2.2.1 [Background \[\] MultiStack.BackgroundManager.backgrounds](#)

The possible background objects.

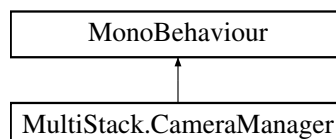
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Environment/Background/BackgroundManager.cs

## 5.3 MultiStack.CameraManager Class Reference

Attached to the main camera in the Game Scene. Handles camera movement on the y axis.

Inheritance diagram for MultiStack.CameraManager:



## Public Member Functions

- void [RequestNewTarget](#) (float target)  
*Requests a new target y position. Confines camera movement to specific areas dependent on current stack height. Limits target position to within +/- 1.5f of current target, not higher than the stacked shapes + 3f, and greater than 0.*
- void [SetTarget](#) (float target, float panspeed=1f)  
*Sets the a new target y position. No constraints are placed on target.*
- void [ResetTarget](#) (float panSpeedToTarget=1f)  
*Resets the target y position to 0.*
- void [StartPanning](#) (float panSpeed=1f)  
*Begins camera movement.*
- void [CallBackOnTargetReached](#) ([Callback](#) callBack)  
*Injects a method to be called when target is reached. Method is invoked once when target reached and then set to null. Call this method before setting a new target.*

- void [ResetPanSpeedOnTargetReached](#) ()

Camera movement speed is reset when target has been reached. Call this before setting a new target if you want the camera movement speed to return to its previous value.

## Public Attributes

- float [targetY](#) = 0

The target y position.

## Properties

- bool [hasReachedTarget](#) [get]

Gets a value indicating whether this [MultiStack.CameraManager](#) has come within 0.2f of target y position.

- bool [shouldPan](#) [set]

Sets a value indicating whether this [MultiStack.CameraManager](#) should pan to target y position.

### 5.3.1 Detailed Description

Attached to the main camera in the Game Scene. Handles camera movement on the y axis.

### 5.3.2 Member Function Documentation

#### 5.3.2.1 void MultiStack.CameraManager.CallBackOnTargetReached ( [Callback](#) *callBack* )

Injects a method to be called when target is reached. Method is invoked once when target reached and then set to null. Call this method before setting a new target.

##### Parameters

<i>callBack</i>	Call back.
-----------------	------------

#### 5.3.2.2 void MultiStack.CameraManager.RequestNewTarget ( float *target* )

Requests a new target y position. Confines camera movement to specific areas dependent on current stack height. Limits target position to within +/- 1.5f of current target, not higher than the stacked shapes + 3f, and greater than 0.

##### Parameters

<i>target</i>	Target y position.
---------------	--------------------

#### 5.3.2.3 void MultiStack.CameraManager.ResetPanSpeedOnTargetReached ( )

Camera movement speed is reset when target has been reached. Call this before setting a new target if you want the camera movement speed to return to its previous value.

#### 5.3.2.4 void MultiStack.CameraManager.ResetTarget ( float *panSpeedToTarget* = 1 f )

Resets the target y position to 0.

## Parameters

<i>panSpeedTo↔ Target</i>	Pan speed to target.
-------------------------------	----------------------

5.3.2.5 void MultiStack.CameraManager.SetTarget ( float *target*, float *panspeed* = 1f )

Sets the a new target y position. No constraints are placed on target.

## Parameters

<i>target</i>	Target.
<i>panspeed</i>	The speed to move to new target.

5.3.2.6 void MultiStack.CameraManager.StartPanning ( float *panSpeed* = 1f )

Begins camera movement.

## Parameters

<i>panSpeed</i>	Pan speed to target.
-----------------	----------------------

## 5.3.3 Member Data Documentation

## 5.3.3.1 float MultiStack.CameraManager.targetY = 0

The target y position.

## 5.3.4 Property Documentation

## 5.3.4.1 bool MultiStack.CameraManager.hasReachedTarget [get]

Gets a value indicating whether this [MultiStack.CameraManager](#) has come within 0.2f of target y position.  
true if has reached target; otherwise, false.

## 5.3.4.2 bool MultiStack.CameraManager.shouldPan [set]

Sets a value indicating whether this [MultiStack.CameraManager](#) should pan to target y position.  
true if should pan; otherwise, false.

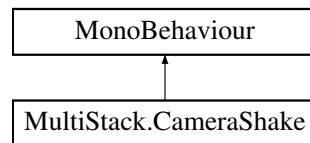
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Camera/CameraManager.cs

## 5.4 MultiStack.CameraShake Class Reference

Handles camera shake on explosion.

Inheritance diagram for MultiStack.CameraShake:



## Public Member Functions

- void [Shake](#) (float shakeIntensity=0.05f, float shakeDecay=0.004f)  
*Begins the shake effect with the desired intensity and decay.*

### 5.4.1 Detailed Description

Handles camera shake on explosion.

### 5.4.2 Member Function Documentation

5.4.2.1 void MultiStack.CameraShake.Shake ( float *shakeIntensity* = 0.05f, float *shakeDecay* = 0.004f )

Begins the shake effect with the desired intensity and decay.

Parameters

<i>shakeIntensity</i>	Shake intensity.
<i>shakeDecay</i>	Shake decay.

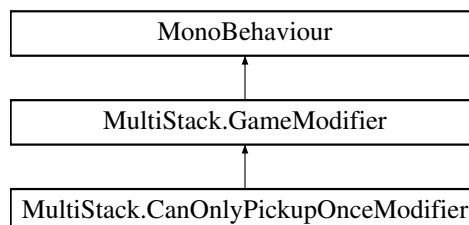
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/CameraShake.cs

## 5.5 MultiStack.CanOnlyPickupOnceModifier Class Reference

When enabled the player can only pickup a shape once. Once a shape is dropped it is no longer draggable. Invokes [MultiStack.ClickHandler.canOnlyClickOnce](#)

Inheritance diagram for MultiStack.CanOnlyPickupOnceModifier:



## Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*

## Public Attributes

- [ClickHandler](#) `clickHandler`

### 5.5.1 Detailed Description

When enabled the player can only pickup a shape once. Once a shape is dropped it is no longer draggable. Invokes [MultiStack.ClickHandler.canOnlyClickOnce](#)

### 5.5.2 Member Function Documentation

#### 5.5.2.1 `override void MultiStack.CanOnlyPickupOnceModifier.Activate ( ) [virtual]`

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.5.2.2 `override void MultiStack.CanOnlyPickupOnceModifier.Deactivate ( ) [virtual]`

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

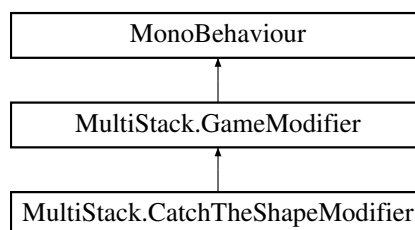
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/Modifiers/CanOnlyPickupOnceModifier.cs`

## 5.6 MultiStack.CatchTheShapeModifier Class Reference

When enabled any newly spawned physics objects are dropped straight away rather than waiting for the player to click on/touch them.

Inheritance diagram for MultiStack.CatchTheShapeModifier:



## Public Member Functions

- `override void Activate ( )`  
*Activate this modifier. Called at the beginning of the round.*
- `override void Deactivate ( )`  
*Deactivate this modifier. Called before a new modifier is enabled.*

## Additional Inherited Members

### 5.6.1 Detailed Description

When enabled any newly spawned physics objects are dropped straight away rather than waiting for the player to click on/touch them.

### 5.6.2 Member Function Documentation

#### 5.6.2.1 override void MultiStack.CatchTheShapeModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.6.2.2 override void MultiStack.CatchTheShapeModifier.Deactivate ( ) [virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

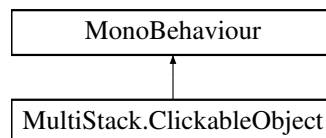
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/CatchTheShapeModifier.cs

## 5.7 MultiStack.ClickableObject Class Reference

Attached to all physics objects. Defines if a object is currently being held. Used by [MultiStack.TurnManager](#) to help decide if a players turn is over. Also used to turn off interaction with object by setting [MultiStack.ClickableObject.clickable](#).

Inheritance diagram for MultiStack.ClickableObject:



### Public Member Functions

- void [Clicked](#) ()  
*Physics obkect has been 'clicked' on.*

### Properties

- bool [clickable](#) [get]  
*Gets a value indicating whether this [MultiStack.ClickableObject](#) is selectable.*

### 5.7.1 Detailed Description

Attached to all physics objects. Defines if a object is currently being held. Used by [MultiStack.TurnManager](#) to help decide if a players turn is over. Also used to turn off interaction with object by setting [MultiStack.ClickableObject.clickable](#).

## 5.7.2 Member Function Documentation

### 5.7.2.1 void MultiStack.ClickableObject.Clicked ( )

Physics object has been 'clicked' on.

## 5.7.3 Property Documentation

### 5.7.3.1 bool MultiStack.ClickableObject.clickable [get]

Gets a value indicating whether this [MultiStack.ClickableObject](#) is selectable.

true if clickable; otherwise, false.

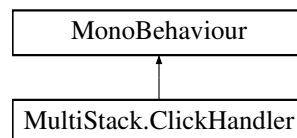
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/ClickableObject.cs

## 5.8 MultiStack.ClickHandler Class Reference

The main click/drag manager. Handles picking up, dragging, and dropping of physics objects via mouse or touch screen controls.

Inheritance diagram for MultiStack.ClickHandler:



### Public Attributes

- bool [isMainMenuScene](#) = false  
*Sets whether this is main menu scene. Camera does not follow picked up objects if it is the main menu scene.*
- LayerMask [boxMask](#)  
*The layermask of the physics objects.*
- LineRenderer [dragLine](#)  
*The line renderer for the line drawn between cursor/finger and grabbed object.*
- PlayerColours [playerColours](#)  
*Reference to player colours, used to change the colour of [MultiStack.ClickHandler.dragLine](#) based on current player.*

### Properties

- bool [useSpring](#) [get, set]  
*Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) should use a spring when dragging an object.*
- float [velocityRatio](#) [get, set]  
*Gets or sets the velocity ratio used when dragging an object.*
- bool [dragReversed](#) [set]  
*Sets a value indicating whether this [MultiStack.ClickHandler](#) has reversed drag i.e. when the player drags right, the shape moves left.*
- bool [shakeyShapes](#) [get, set]



*Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) should use shakey shapes. When enabled a random offset is added to the shapes position each time step.*

- bool [increaseShapeSize](#) [get, set]

*Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) should increase shape size when a shape is held.*

- bool [canOnlyClickOnce](#) [get, set]

*Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) can only grab an object once.*

### 5.8.1 Detailed Description

The main click/drag manager. Handles picking up, dragging, and dropping of physics objects via mouse or touch screen controls.

### 5.8.2 Member Data Documentation

#### 5.8.2.1 LayerMask MultiStack.ClickHandler.boxMask

The layermask of the physics objects.

#### 5.8.2.2 LineRenderer MultiStack.ClickHandler.dragLine

The line renderer for the line drawn between cursor/finger and grabbed object.

#### 5.8.2.3 bool MultiStack.ClickHandler.isMainMenuScene = false

Sets whether this is main menu scene. Camera does not follow picked up objects if it is the main menu scene.

#### 5.8.2.4 PlayerColours MultiStack.ClickHandler.playerColours

Reference to player colours, used to change the colour of [MultiStack.ClickHandler.dragLine](#) based on current player.

### 5.8.3 Property Documentation

#### 5.8.3.1 bool MultiStack.ClickHandler.canOnlyClickOnce [get], [set]

Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) can only grab an object once.

true if can only click once; otherwise, false.

#### 5.8.3.2 bool MultiStack.ClickHandler.dragReversed [set]

Sets a value indicating whether this [MultiStack.ClickHandler](#) has reversed drag i.e. when the player drags right, the shape moves left.

true if drag reversed; otherwise, false.

#### 5.8.3.3 bool MultiStack.ClickHandler.increaseShapeSize [get], [set]

Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) should increase shape size when a shape is held.

true if increase shape size; otherwise, false.

#### 5.8.3.4 bool MultiStack.ClickHandler.shakeyShapes [get], [set]

Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) should use shakey shapes. When enabled a random offset is added to the shapes position each time step.

true if shakey shapes; otherwise, false.

#### 5.8.3.5 bool MultiStack.ClickHandler.useSpring [get], [set]

Gets or sets a value indicating whether this [MultiStack.ClickHandler](#) should use a spring when dragging an object.

true if use spring; otherwise, false.

#### 5.8.3.6 float MultiStack.ClickHandler.velocityRatio [get], [set]

Gets or sets the velocity ratio used when dragging an object.

The velocity ratio.

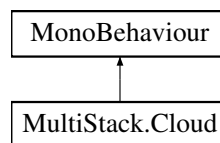
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/ClickHandler.cs

## 5.9 MultiStack.Cloud Class Reference

Translates a cloud across the screen based on [MultiStack.Cloud.minSpeed](#) and [MultiStack.Cloud.maxSpeed](#).

Inheritance diagram for MultiStack.Cloud:



### Public Attributes

- float [minSpeed](#)  
*The minimum speed of the cloud.*
- float [maxSpeed](#)  
*The maximum speed of the cloud.*

#### 5.9.1 Detailed Description

Translates a cloud across the screen based on [MultiStack.Cloud.minSpeed](#) and [MultiStack.Cloud.maxSpeed](#).

#### 5.9.2 Member Data Documentation

##### 5.9.2.1 float MultiStack.Cloud.maxSpeed

The maximum speed of the cloud.

## 5.9.2.2 float MultiStack.Cloud.minSpeed

The minimum speed of the cloud.

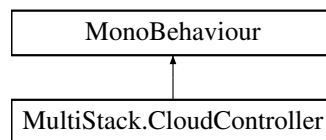
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Environment/Clouds/Cloud.cs

## 5.10 MultiStack.CloudController Class Reference

Handles creation of clouds.

Inheritance diagram for MultiStack.CloudController:



### Public Member Functions

- void [PoolCloud](#) (GameObject cloud)  
*Adds a cloud to a pool to be reused when a new cloud is required.*

### Public Attributes

- float [maxTimeBetweenClouds](#)  
*The maximum time between spawning clouds.*
- float [minTimeBetweenClouds](#)  
*The minimum time between spawning clouds.*
- float [yRandomOffset](#) = 5f  
*A random offset between -yRandomOffset and +yRandomOffset is applied to the y position of all spawned clouds.*
- GameObject[] [cloudPrefabs](#)  
*The cloud prefabs to be instantiated.*

### 5.10.1 Detailed Description

Handles creation of clouds.

### 5.10.2 Member Function Documentation

#### 5.10.2.1 void MultiStack.CloudController.PoolCloud ( GameObject cloud )

Adds a cloud to a pool to be reused when a new cloud is required.

Parameters

<i>cloud</i>	<a href="#">Cloud.</a>
--------------	------------------------

### 5.10.3 Member Data Documentation

#### 5.10.3.1 `GameObject [ ] MultiStack.CloudController.cloudPrefabs`

The cloud prefabs to be instantiated.

#### 5.10.3.2 `float MultiStack.CloudController.maxTimeBetweenClouds`

The maximum time between spawning clouds.

#### 5.10.3.3 `float MultiStack.CloudController.minTimeBetweenClouds`

The minimum time between spawning clouds.

#### 5.10.3.4 `float MultiStack.CloudController.yRandomOffset = 5f`

A random offset between `-yRandomOffset` and `+yRandomOffset` is applied to the y position of all spawned clouds.

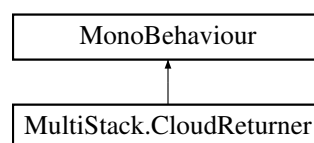
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/Environment/Clouds/CloudController.cs`

## 5.11 MultiStack.CloudReturner Class Reference

Invokes [MultiStack.CloudController.PoolCloud](#) when object enters trigger. This is placed at opposite end of the screen to the [MultiStack.CloudController](#).

Inheritance diagram for MultiStack.CloudReturner:



### Public Attributes

- [CloudController cloudController](#)

*Reference to the cloud controller.*

#### 5.11.1 Detailed Description

Invokes [MultiStack.CloudController.PoolCloud](#) when object enters trigger. This is placed at opposite end of the screen to the [MultiStack.CloudController](#).

### 5.11.2 Member Data Documentation

#### 5.11.2.1 CloudController MultiStack.CloudReturner.cloudController

Reference to the cloud controller.

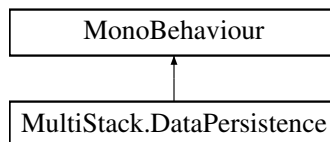
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Environment/Clouds/CloudReturner.cs

## 5.12 MultiStack.DataPersistence Class Reference

Data persistence. Handles saving and loading of height and round data. The highest reached height and round are saved and retrieved from file.

Inheritance diagram for MultiStack.DataPersistence:



### Public Member Functions

- void `Load` ()  
*Load the highest round and height from file.*
- void `Save` (int `height`, int `round`)  
*If height or round score greater than stored height/round then it is saved to file.*

### Properties

- int `height` [get]  
*Gets the height. Loaded from file.*
- int `round` [get]  
*Gets the round. Loaded from file.*
- static `DataPersistence instance` [get]  
*Gets the instance of this class. Can be accessed from any script.*

### 5.12.1 Detailed Description

Data persistence. Handles saving and loading of height and round data. The highest reached height and round are saved and retrieved from file.

### 5.12.2 Member Function Documentation

#### 5.12.2.1 void MultiStack.DataPersistence.Load ( )

Load the highest round and height from file.

5.12.2.2 void MultiStack.DataPersistence.Save ( int *height*, int *round* )

If height or round score greater than stored height/round then it is saved to file.

## Parameters

<i>score</i>	Score.
--------------	--------

### 5.12.3 Property Documentation

#### 5.12.3.1 `int MultiStack.DataPersistence.height` `[get]`

Gets the height. Loaded from file.

The score.

#### 5.12.3.2 `DataPersistence MultiStack.DataPersistence.instance` `[static]`, `[get]`

Gets the instance of this class. Can be accessed from any script.

The instance.

#### 5.12.3.3 `int MultiStack.DataPersistence.round` `[get]`

Gets the round. Loaded from file.

The round.

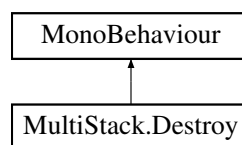
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/High Score/DataPersistence.cs

## 5.13 MultiStack.Destroy Class Reference

Used during the explosion animation to destroy the gameobject on animation end.

Inheritance diagram for MultiStack.Destroy:



### Public Member Functions

- void `ExecuteDestroy` ()  
*Executes the destroy command on gameobject.*

#### 5.13.1 Detailed Description

Used during the explosion animation to destroy the gameobject on animation end.

#### 5.13.2 Member Function Documentation

### 5.13.2.1 void MultiStack.Destroy.ExecuteDestroy ( )

Executes the destroy command on gameobject.

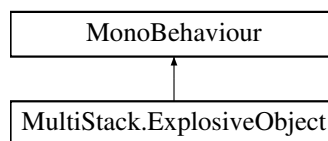
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Animation/Destroy.cs

## 5.14 MultiStack.ExplosiveObject Class Reference

Attached to any shape that can be turned into an explosive shape. Handles changing a shapes sprite and exploding.

Inheritance diagram for MultiStack.ExplosiveObject:



### Public Member Functions

- void [Activate](#) ()  
*Activate this instance and changes the shapes sprite to that of [MultiStack.ExplosiveObject.explosiveSprite](#).*
- void [Execute](#) ()  
*Explodes this shape. Plays explosion audio, instantiates explosion fragments, plays explosion animation, applies explosive force to all shapes within the radius, and enables camera shake.*

### Public Attributes

- GameObject [explosionPrefab](#)  
*The prefab for the explosion animation.*
- Sprite [explosiveSprite](#)  
*The shapes explosive sprite.*
- GameObject[] [explodedObjects](#)  
*Object prefabs to be spawned when the shape is exploded.*
- float [explosiveForce](#) = 500f  
*The force applied to shapes within the [MultiStack.ExplosiveObject.explosiveRadius](#)*
- float [explosiveRadius](#) = 2f  
*The explosion radius. Force is applied to all other shapes within this radius.*
- float [requiredForceToExplode](#) = 5.3f  
*The force if contact between this shape and another shape to trigger the explosion.*
- AudioClip [explosionAudioClip](#)  
*An audio clip to play when an explosion occurs.*

### Properties

- bool [readyToBeActivated](#) [get]  
*Gets a value indicating whether this [MultiStack.ExplosiveObject](#) is ready to be activated.*



### 5.14.1 Detailed Description

Attached to any shape that can be turned into an explosive shape. Handles changing a shapes sprite and exploding.

### 5.14.2 Member Function Documentation

#### 5.14.2.1 void MultiStack.ExplosiveObject.Activate ( )

Activate this instance and changes the shapes sprite to that of [MultiStack.ExplosiveObject.explosiveSprite](#).

#### 5.14.2.2 void MultiStack.ExplosiveObject.Execute ( )

Explodes this shape. Plays explosion audio, instantiates explosion fragments, plays explosion animation, applies explosive force to all shapes within the radius, and enables camera shake.

### 5.14.3 Member Data Documentation

#### 5.14.3.1 GameObject [ ] MultiStack.ExplosiveObject.explodedObjects

Object prefabs to be spawned when the shape is exploded.

#### 5.14.3.2 AudioClip MultiStack.ExplosiveObject.explosionAudioClip

An audio clip to play when an explosion occurs.

#### 5.14.3.3 GameObject MultiStack.ExplosiveObject.explosionPrefab

The prfab for the explosion animation.

#### 5.14.3.4 float MultiStack.ExplosiveObject.explosiveForce = 500f

The force applied to shapes within the [MultiStack.ExplosiveObject.explosiveRadius](#)

#### 5.14.3.5 float MultiStack.ExplosiveObject.explosiveRadius = 2f

The explosion radius. Force is applied to all other shapes within this radius.

#### 5.14.3.6 Sprite MultiStack.ExplosiveObject.explosiveSprite

The shapes explosive sprite.

#### 5.14.3.7 float MultiStack.ExplosiveObject.requiredForceToExplode = 5.3f

The force if contact between this shape and another shape to trigger the explosion.

### 5.14.4 Property Documentation

#### 5.14.4.1 bool MultiStack.ExplosiveObject.readyToBeActivated [get]

Gets a value indicating whether this [MultiStack.ExplosiveObject](#) is ready to be activated.

true if ready to be activated; otherwise, false.

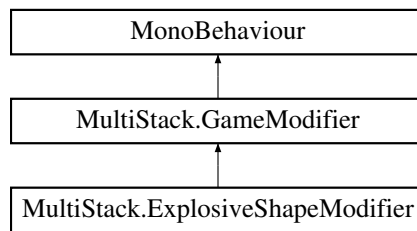
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Objects/ExplosiveObject.cs

## 5.15 MultiStack.ExplosiveShapeModifier Class Reference

When enabled and conditions met a random shape is turned into an explosive shape. Invokes [MultiStack.TurnManager.ChangeShapeToExplosive](#).

Inheritance diagram for MultiStack.ExplosiveShapeModifier:



### Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*
- override bool [ConditionsMet](#) ()  
*Returns true if any spawned shape can be turned into an explosive shape.*

### Additional Inherited Members

#### 5.15.1 Detailed Description

When enabled and conditions met a random shape is turned into an explosive shape. Invokes [MultiStack.TurnManager.ChangeShapeToExplosive](#).

#### 5.15.2 Member Function Documentation

##### 5.15.2.1 override void MultiStack.ExplosiveShapeModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

##### 5.15.2.2 override bool MultiStack.ExplosiveShapeModifier.ConditionsMet ( ) [virtual]

Returns true if any spawned shape can be turned into an explosive shape.

**Returns**

true if a shape can be turned into explosive shape.

false

Reimplemented from [MultiStack.GameModifier](#).

**5.15.2.3 override void MultiStack.ExplosiveShapeModifier.Deactivate ( ) [virtual]**

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

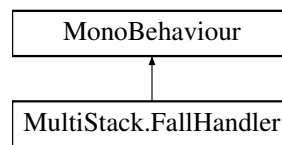
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/ExplosiveShapeModifier.cs

**5.16 MultiStack.FallHandler Class Reference**

Moves camera position to this position if a physics object enters its trigger. Used to move camera to a falling shape.

Inheritance diagram for MultiStack.FallHandler:

**Public Attributes**

- LayerMask [boxMask](#)  
*The layermask of the physics object.*
- float [requiredRigidBodyYVelocity](#) = 4f  
*The required physics shape y velocity for the camera to focus on the object.*
- float [panSpeed](#) = 2f  
*The speed at which the camera pans to the object.*

**5.16.1 Detailed Description**

Moves camera position to this position if a physics object enters its trigger. Used to move camera to a falling shape.

**5.16.2 Member Data Documentation****5.16.2.1 LayerMask MultiStack.FallHandler.boxMask**

The layermask of the physics object.

**5.16.2.2 float MultiStack.FallHandler.panSpeed = 2f**

The speed at which the camera pans to the object.

### 5.16.2.3 float MultiStack.FallHandler.requiredRigidBodyYVelocity = 4f

The required physics shape y velocity for the camera to focus on the object.

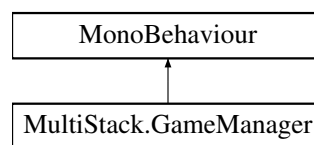
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Managers/FallHandler.cs

## 5.17 MultiStack.GameManager Class Reference

Controls the game flow. Handles beginning the game, spawning the stage, starting new rounds, and ending the game.

Inheritance diagram for MultiStack.GameManager:



### Public Member Functions

- void [OnGameOver](#) ([GameOverType](#) gameOverType=[GameOverType.ShapeOffScreen](#))  
*Called in the event of a game over (either a players timer reaches zero or a shape falls out of bounds). Disables camera panning and [MultiStack.TurnManager](#) updates, and saves current height and round via [MultiStack.Data↔Persistence](#)*
- void [OnRoundOver](#) ()  
*Raised at the end of each round. Shows new round text, applies a round modifier via [MultiStack.GameModifier↔Manager](#) and invokes [MultiStack.TurnManager.StartNewRound](#).*

### Public Attributes

- [UIFlash](#) uiFlash  
*Reference to [UIFlash](#), used to hide the game behind a semi-transparent texture on game over.*
- [GameOverUI](#) gameOverUI  
*The game over UI controller.*
- [StageSelector](#) stageSelector  
*The stage selector. Used to spawn the stage at the beginning of the game.*
- [GameModifierManager](#) gameModifierManager  
*The game modifier manager. Used to apply a game modifier at the beginning of each round.*
- [GameText](#) infoText  
*The info text UI object. Provides information to the player.*

### Properties

- bool [isGameOver](#) [get]  
*Gets a value indicating whether the game is over.*
- static [GameManager](#) instance [get]  
*Gets the instance of this class. Accessible from any class.*

### 5.17.1 Detailed Description

Controls the game flow. Handles beginning the game, spawning the stage, starting new rounds, and ending the game.

### 5.17.2 Member Function Documentation

**5.17.2.1** `void MultiStack.GameManager.OnGameOver ( GameOverType gameOverType = GameOverType.ShapeOffScreen )`

Called in the event of a game over (either a players timer reaches zero or a shape falls out of bounds). Disables camera panning and [MultiStack.TurnManager](#) updates, and saves current height and round via [MultiStack.Data↔Persistence](#)

**5.17.2.2** `void MultiStack.GameManager.OnRoundOver ( )`

Raised at the end of each round. Shows new round text, applies a round modifier via [MultiStack.GameModifier↔Manager](#) and invokes [MultiStack.TurnManager.StartNewRound](#).

### 5.17.3 Member Data Documentation

**5.17.3.1** `GameModifierManager MultiStack.GameManager.gameModifierManager`

The game modifier manager. Used to apply a game modifier at the beginning of each round.

**5.17.3.2** `GameOverUI MultiStack.GameManager.gameOverUI`

The game over UI controller.

**5.17.3.3** `GameText MultiStack.GameManager.infoText`

The info text UI object. Provides information to the player.

**5.17.3.4** `StageSelector MultiStack.GameManager.stageSelector`

The stage selector. Used to spawn the stage at the beginning of the game.

**5.17.3.5** `UIFlash MultiStack.GameManager.uiFlash`

Reference to [UIFlash](#), used to hide the game behind a semi-transparent texture on game over.

### 5.17.4 Property Documentation

**5.17.4.1** `GameManager MultiStack.GameManager.instance` `[static], [get]`

Gets the instance of this class. Accessible from any class.

The instance.

### 5.17.4.2 bool MultiStack.GameManager.isGameOver [get]

Gets a value indicating whether the game is over.

true if is game over; otherwise, false.

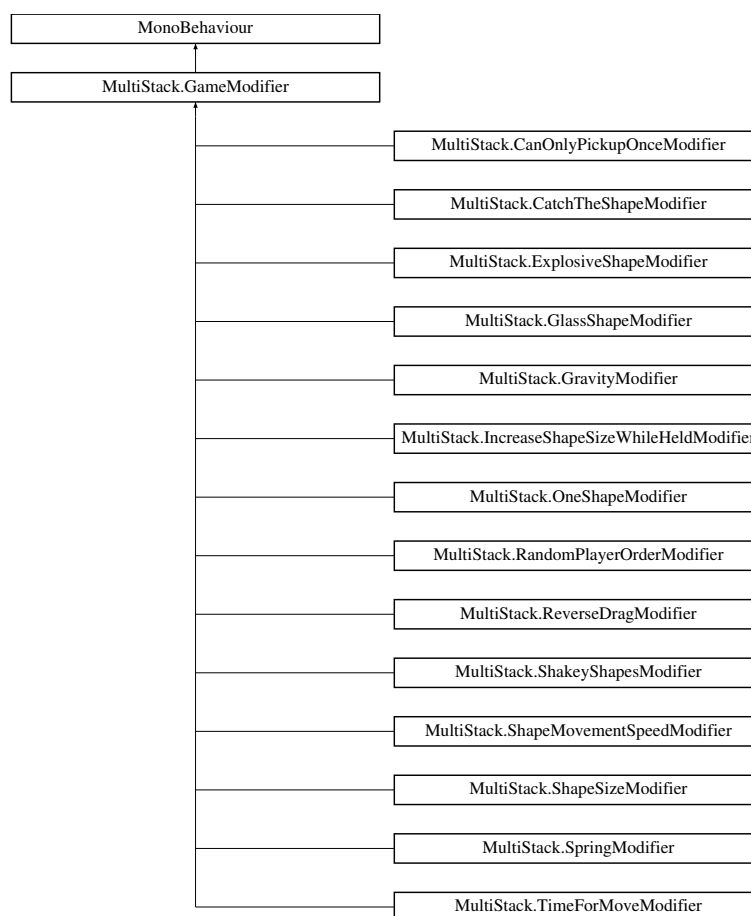
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Managers/GameManager.cs

## 5.18 MultiStack.GameModifier Class Reference

The abstract base class for every game modifier. Game modifiers are applied each round to change how the game is played.

Inheritance diagram for MultiStack.GameModifier:



### Public Member Functions

- abstract void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- abstract void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*
- virtual bool [ConditionsMet](#) ()  
*Place any prerequisites for the modifier here. By default a modifier has all conditions met unless this method is overridden.*

## Public Attributes

- bool [IsEnabled](#) = true

*Set whether this game modifier is enabled. Disable this in the inspector to prevent the modifier from being applied.*

- string [modifierName](#)

*The modifier name. This is shown in the UI when the modifier is applied.*

## 5.18.1 Detailed Description

The abstract base class for every game modifier. Game modifiers are applied each round to change how the game is played.

## 5.18.2 Member Function Documentation

### 5.18.2.1 abstract void MultiStack.GameModifier.Activate ( ) [pure virtual]

Activate this modifier. Called at the beginning of the round.

Implemented in [MultiStack.OneShapeModifier](#), [MultiStack.TimeForMoveModifier](#), [MultiStack.GravityModifier](#), [MultiStack.ShapeMovementSpeedModifier](#), [MultiStack.CanOnlyPickupOnceModifier](#), [MultiStack.ExplosiveShapeModifier](#), [MultiStack.IncreaseShapeSizeWhileHeldModifier](#), [MultiStack.ReverseDragModifier](#), [MultiStack.ShakeyShapesModifier](#), [MultiStack.ShapeSizeModifier](#), [MultiStack.SpringModifier](#), [MultiStack.GlassShapeModifier](#), [MultiStack.CatchTheShapeModifier](#), and [MultiStack.RandomPlayerOrderModifier](#).

### 5.18.2.2 virtual bool MultiStack.GameModifier.ConditionsMet ( ) [virtual]

Place any prerequisites for the modifier here. By default a modifier has all conditions met unless this method is overridden.

#### Returns

true, if met was conditioned, false otherwise.

Reimplemented in [MultiStack.ExplosiveShapeModifier](#), and [MultiStack.GlassShapeModifier](#).

### 5.18.2.3 abstract void MultiStack.GameModifier.Deactivate ( ) [pure virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implemented in [MultiStack.OneShapeModifier](#), [MultiStack.TimeForMoveModifier](#), [MultiStack.GravityModifier](#), [MultiStack.ShapeMovementSpeedModifier](#), [MultiStack.CanOnlyPickupOnceModifier](#), [MultiStack.ExplosiveShapeModifier](#), [MultiStack.IncreaseShapeSizeWhileHeldModifier](#), [MultiStack.ReverseDragModifier](#), [MultiStack.ShakeyShapesModifier](#), [MultiStack.ShapeSizeModifier](#), [MultiStack.SpringModifier](#), [MultiStack.GlassShapeModifier](#), [MultiStack.CatchTheShapeModifier](#), and [MultiStack.RandomPlayerOrderModifier](#).

## 5.18.3 Member Data Documentation

### 5.18.3.1 bool MultiStack.GameModifier.IsEnabled = true

Set whether this game modifier is enabled. Disable this in the inspector to prevent the modifier from being applied.

### 5.18.3.2 `string MultiStack.GameModifier.modifierName`

The modifier name. This is shown in the UI when the modifier is applied.

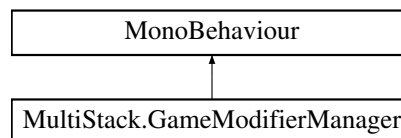
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/Modifiers/GameModifier.cs`

## 5.19 MultiStack.GameModifierManager Class Reference

Handles game modifiers. These are modifiers applied at the beginning of each round (e.g. low gravity).

Inheritance diagram for `MultiStack.GameModifierManager`:



### Public Member Functions

- `string ApplyNewModifier ()`  
*Applies a new modifier if there are any valid and enabled modifiers.*

### 5.19.1 Detailed Description

Handles game modifiers. These are modifiers applied at the beginning of each round (e.g. low gravity).

### 5.19.2 Member Function Documentation

#### 5.19.2.1 `string MultiStack.GameModifierManager.ApplyNewModifier ( )`

Applies a new modifier if there are any valid and enabled modifiers.

#### Returns

The new modifiers name, used to update the UI.

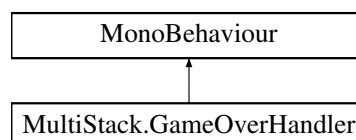
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/Managers/GameModifierManager.cs`

## 5.20 MultiStack.GameOverHandler Class Reference

Invokes `MultiStack.GameManager.OnGameOver` when a physics object enters trigger.

Inheritance diagram for `MultiStack.GameOverHandler`:





### 5.20.1 Detailed Description

Invokes [MultiStack.GameManager.OnGameOver](#) when a physics object enters trigger.

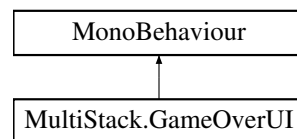
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Managers/GameOverHandler.cs

## 5.21 MultiStack.GameOverUI Class Reference

Handles the displaying of the UI in the event of a game over.

Inheritance diagram for MultiStack.GameOverUI:



### Public Member Functions

- void [Activate](#) ()  
*Activate this instance. Shows the game over UI.*
- void [RestartScene](#) ()  
*Reloads the current scene.*
- void [ReturnToMainMenu](#) ()  
*Returns to main menu scene.*

### Public Attributes

- GameObject [title](#)  
*The gameobject for the title UI.*
- GameObject [newRecord](#)  
*The gameobject that holds the new record UI elements.*
- [GameText\[\] nonGameOverUIText](#)  
*Add any UI not related to the game over UI that you would like to hide.*
- GameObject [playerLostTitle](#)  
*The title UI for player lost.*
- [GameText playerLostText](#)  
*The player lost text. Holds the number of the player that has lost the game.*
- GameObject [heightReachedTitle](#)  
*The UI title for the hieght field.*
- [GameText heightReachedText](#)  
*The hieght reached text. Holds the height reached the current game.*
- GameObject [roundsReachedTitle](#)  
*The rounds reached title.*
- [GameText roundsReachedText](#)  
*The rounds reached text. Holds the round reached in the current game.*
- GameObject [restartButton](#)  
*The restart button.*
- GameObject [mainMenuButton](#)  
*The main menu button.*

### 5.21.1 Detailed Description

Handles the displaying of the UI in the event of a game over.

### 5.21.2 Member Function Documentation

#### 5.21.2.1 void MultiStack.GameOverUI.Activate ( )

Activate this instance. Shows the game over UI.

#### 5.21.2.2 void MultiStack.GameOverUI.RestartScene ( )

Reloads the current scene.

#### 5.21.2.3 void MultiStack.GameOverUI.ReturnToMainMenu ( )

Returns to main menu scene.

### 5.21.3 Member Data Documentation

#### 5.21.3.1 GameText MultiStack.GameOverUI.heightReachedText

The hieght reached text. Holds the height reached the current game.

#### 5.21.3.2 GameObject MultiStack.GameOverUI.heightReachedTitle

The UI title for the hieght field.

#### 5.21.3.3 GameObject MultiStack.GameOverUI.mainMenuButton

The main menu button.

#### 5.21.3.4 GameObject MultiStack.GameOverUI.newRecord

The gameobject that holds the new record UI elements.

#### 5.21.3.5 GameText [ ] MultiStack.GameOverUI.nonGameoverUIText

Add any UI not related to the game over UI that you would like to hide.

#### 5.21.3.6 GameText MultiStack.GameOverUI.playerLostText

The player lost text. Holds the number of the player that has lost the game.

#### 5.21.3.7 GameObject MultiStack.GameOverUI.playerLostTitle

The title UI for player lost.

## 5.21.3.8 GameObject MultiStack.GameOverUI.restartButton

The restart button.

## 5.21.3.9 GameText MultiStack.GameOverUI.roundsReachedText

The rounds reached text. Holds the round reached in the current game.

## 5.21.3.10 GameObject MultiStack.GameOverUI.roundsReachedTitle

The rounds reached title.

## 5.21.3.11 GameObject MultiStack.GameOverUI.title

The gameobject for the title UI.

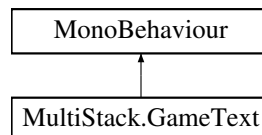
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/GameOverUI.cs

## 5.22 MultiStack.GameText Class Reference

A simple wrapper for the text object.

Inheritance diagram for MultiStack.GameText:



### Public Member Functions

- void [UpdateText](#) (string msg, Color colour)  
*Updates the UI text with the desired font colour.*
- void [UpdateText](#) (string msg)  
*Updates the UI text.*
- void [HideTextAfterTime](#) (float seconds)  
*Hides the text after time in seconds.*
- void [HideText](#) ()  
*Clears the UI text field.*
- void [ChangeFontColour](#) (Color colour)  
*Changes the font colour.*

### Public Attributes

- bool [clearOnStart](#) = true  
*Clears all text on scene start.*

## Properties

- string `text` [get]  
*Gets the text value.*

### 5.22.1 Detailed Description

A simple wrapper for the text object.

### 5.22.2 Member Function Documentation

#### 5.22.2.1 void MultiStack.GameText.ChangeFontColour ( Color *colour* )

Changes the font colour.

Parameters

<i>colour</i>	Colour.
---------------	---------

#### 5.22.2.2 void MultiStack.GameText.HideText ( )

Clears the UI text field.

#### 5.22.2.3 void MultiStack.GameText.HideTextAfterTime ( float *seconds* )

Hides the text after time in seconds.

Parameters

<i>seconds</i>	Seconds.
----------------	----------

#### 5.22.2.4 void MultiStack.GameText.UpdateText ( string *msg*, Color *colour* )

Updates the UI text with the desired font colour.

Parameters

<i>msg</i>	Message.
<i>colour</i>	Colour.

#### 5.22.2.5 void MultiStack.GameText.UpdateText ( string *msg* )

Updates the UI text.

Parameters

<i>msg</i>	Message.
------------	----------

### 5.22.3 Member Data Documentation

#### 5.22.3.1 bool MultiStack.GameText.clearOnStart = true

Clears all text on scene start.

### 5.22.4 Property Documentation

#### 5.22.4.1 string MultiStack.GameText.text [get]

Gets the text value.

The text.

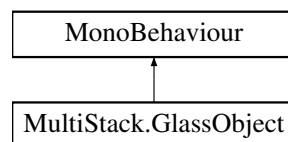
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/GameText.cs

## 5.23 MultiStack.GlassObject Class Reference

Attached to any shape that can be turned into a glass shape. Handles changing a shapes sprite and breaking.

Inheritance diagram for MultiStack.GlassObject:



### Public Member Functions

- void [Activate](#) ()  
*Activate this instance and changes the shapes sprite to that of [MultiStack.GlassObject.initialGlassSprite](#).*

### Public Attributes

- Sprite [initialGlassSprite](#)  
*The shapes sprite is changed to this sprite when it is activated.*
- Sprite[] [brokenStages](#)  
*The broken stages. A glass shape can go through a number of stages before breaking. This holds the sprite for each stage.*
- GameObject[] [smashedObjectPrefabs](#)  
*The smashed object prefabs. Spawned when the glass object breaks.*
- AudioClip [crackedAudioClip](#)  
*The audioclip to play when the glass shape cracks.*
- AudioClip [smashedAudioClip](#)  
*The audio clip to play when the glass shape breaks.*
- float [requiredForceToCrack](#) = 2f  
*The required force to crack. When an object collides with this shape, if the collision force is above this force then the shape cracks/breaks.*
- float [requiredMassToCrack](#) = 2f  
*The required combined mass of shapes placed on top of this shape to cause the shape to break/crack.*
- LayerMask [boxMask](#)  
*The layermask for physics objects.*

### Properties

- bool [readyToBeActivated](#) [get]  
*Gets a value indicating whether this [MultiStack.GlassObject](#) is ready to be activated.*

### 5.23.1 Detailed Description

Attached to any shape that can be turned into a glass shape. Handles changing a shapes sprite and breaking.

### 5.23.2 Member Function Documentation

#### 5.23.2.1 void MultiStack.GlassObject.Activate ( )

Activate this instance and changes the shapes sprite to that of [MultiStack.GlassObject.initialGlassSprite](#).

### 5.23.3 Member Data Documentation

#### 5.23.3.1 LayerMask MultiStack.GlassObject.boxMask

The layermask for physics objects.

#### 5.23.3.2 Sprite [ ] MultiStack.GlassObject.brokenStages

The broken stages. A glass shape can go through a number of stages before breaking. This holds the sprite for each stage.

#### 5.23.3.3 AudioClip MultiStack.GlassObject.crackedAudioClip

The audioclip to play when the glass shape cracks.

#### 5.23.3.4 Sprite MultiStack.GlassObject.initialGlassSprite

The shapes sprite is changed to this sprite when it is activated.

#### 5.23.3.5 float MultiStack.GlassObject.requiredForceToCrack = 2f

The required force to crack. When an object collides with this shape, if the collision force is above this force then the shape cracks/breaks.

#### 5.23.3.6 float MultiStack.GlassObject.requiredMassToCrack = 2f

The required combined mass of shapes placed on top of this shape to cause the shape to break/crack.

#### 5.23.3.7 AudioClip MultiStack.GlassObject.smashedAudioClip

The audio clip to play when the glass shape breaks.

#### 5.23.3.8 GameObject [ ] MultiStack.GlassObject.smashedObjectPrefabs

The smashed object prefabs. Spawned when the glass object breaks.

### 5.23.4 Property Documentation

#### 5.23.4.1 bool MultiStack.GlassObject.readyToBeActivated [get]

Gets a value indicating whether this [MultiStack.GlassObject](#) is ready to be activated.

true if ready to be activated; otherwise, false.

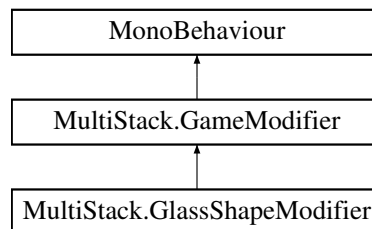
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Objects/GlassObject.cs

## 5.24 MultiStack.GlassShapeModifier Class Reference

When enabled and conditions met a random shape is turned into an glass shape. Invokes [MultiStack.TurnManager.ChangeShapeToGlass](#).

Inheritance diagram for MultiStack.GlassShapeModifier:



### Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*
- override bool [ConditionsMet](#) ()  
*Returns true if any spawned shape can be turned into an glass shape.*

### Additional Inherited Members

#### 5.24.1 Detailed Description

When enabled and conditions met a random shape is turned into an glass shape. Invokes [MultiStack.TurnManager.ChangeShapeToGlass](#).

#### 5.24.2 Member Function Documentation

##### 5.24.2.1 override void MultiStack.GlassShapeModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.24.2.2 `override bool MultiStack.GlassShapeModifier.ConditionsMet ( ) [virtual]`

Returns true if any spawned shape can be turned into an glass shape.

##### Returns

true if a shape can be turned into glass shape.

false

Reimplemented from [MultiStack.GameModifier](#).

#### 5.24.2.3 `override void MultiStack.GlassShapeModifier.Deactivate ( ) [virtual]`

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

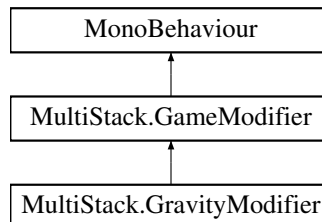
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/Modifiers/GlassShapeModifier.cs`

## 5.25 MultiStack.GravityModifier Class Reference

When enabled a gravity modifier is applied to all spawned shapes.

Inheritance diagram for MultiStack.GravityModifier:



### Public Member Functions

- `override void Activate ( )`  
*Activate this modifier. Called at the beginning of the round.*
- `override void Deactivate ( )`  
*Deactivate this modifier. Called before a new modifier is enabled.*

### Public Attributes

- float [gravityModifier](#)  
*Every spawned objects gravity will be multiplied by this modifier.*
- [TurnManager](#) **turnManager**

#### 5.25.1 Detailed Description

When enabled a gravity modifier is applied to all spawned shapes.



## 5.25.2 Member Function Documentation

### 5.25.2.1 override void MultiStack.GravityModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

### 5.25.2.2 override void MultiStack.GravityModifier.Deactivate ( ) [virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

## 5.25.3 Member Data Documentation

### 5.25.3.1 float MultiStack.GravityModifier.gravityModifier

Every spawned objects gravity will be multiplied by this modifier.

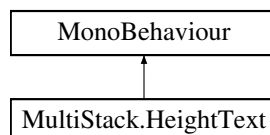
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/GravityModifier.cs

## 5.26 MultiStack.HeightText Class Reference

The UI for the height shown during the game scene.

Inheritance diagram for MultiStack.HeightText:



### 5.26.1 Detailed Description

The UI for the height shown during the game scene.

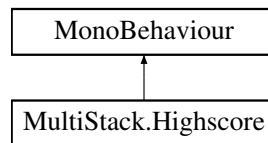
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/HeightText.cs

## 5.27 MultiStack.Highscore Class Reference

The UI for the highest height reached on the Main menu scene.

Inheritance diagram for MultiStack.Highscore:



### 5.27.1 Detailed Description

The UI for the highest height reached on the Main menu scene.

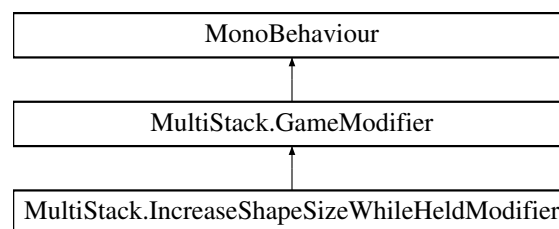
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/UI/Highscore.cs`

## 5.28 MultiStack.IncreaseShapeSizeWhileHeldModifier Class Reference

When enabled a shapes size increases while being dragged.

Inheritance diagram for MultiStack.IncreaseShapeSizeWhileHeldModifier:



### Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*

### Public Attributes

- [ClickHandler](#) **clickHandler**

### 5.28.1 Detailed Description

When enabled a shapes size increases while being dragged.

### 5.28.2 Member Function Documentation

#### 5.28.2.1 override void MultiStack.IncreaseShapeSizeWhileHeldModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

### 5.28.2.2 override void MultiStack.IncreaseShapeSizeWhileHeldModifier.Deactivate ( ) [virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

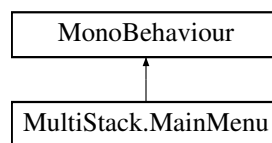
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/IncreaseShapeSizeWhileHeldModifier.cs

## 5.29 MultiStack.MainMenu Class Reference

Handles the UI for main menu and number of players select scene.

Inheritance diagram for MultiStack.MainMenu:



### Public Member Functions

- void [PlayerBoxPlaced](#) ()  
*Called when the player places a box on the platform.*
- void [PlayerBoxRemoved](#) ()  
*Called when the player removes a box from the platform.*
- void [PlayButtonPressed](#) ()  
*Called when the play button has been pressed. If it is the first time it has been pressed, then it pans the camera down and then spawns the boxes else it loads the game scene.*

### Public Attributes

- [GameText](#) [titleText](#)  
*The title text.*
- [GameText](#) [numOfPlayersText](#)  
*The number of players text.*
- [GameText](#) [otherText](#)  
*The other text. This is used to show messages to the player.*
- [RectTransform](#) [playButton](#)  
*The play button rect transform. Used to translate the button when moving to the number of players screen.*
- [GameObject](#) [playerBoxPrefab](#)  
*The prefab for the physics boxes used in the number of players select screen.*
- [Transform\[\]](#) [playerBoxSpawnLocations](#)  
*The box spawn locations.*

### 5.29.1 Detailed Description

Handles the UI for main menu and number of players select scene.

## 5.29.2 Member Function Documentation

### 5.29.2.1 void MultiStack.MainMenu.PlayButtonPressed ( )

Called when the play button has been pressed. If it is the first time it has been pressed, then it pans the camera down and then spawns the boxes else it loads the game scene.

### 5.29.2.2 void MultiStack.MainMenu.PlayerBoxPlaced ( )

Called when the player places a box on the platform.

### 5.29.2.3 void MultiStack.MainMenu.PlayerBoxRemoved ( )

Called when the player removes a box from the platform.

## 5.29.3 Member Data Documentation

### 5.29.3.1 GameText MultiStack.MainMenu.numOfPlayersText

The number of players text.

### 5.29.3.2 GameText MultiStack.MainMenu.otherText

The other text. This is used to show messages to the player.

### 5.29.3.3 RectTransform MultiStack.MainMenu.playButton

The play button rect transform. Used to translate the button when moving to the number of players screen.

### 5.29.3.4 GameObject MultiStack.MainMenu.playerBoxPrefab

The prefab for the physics boxes used in the number of players select screen.

### 5.29.3.5 Transform [ ] MultiStack.MainMenu.playerBoxSpawnLocations

The box spawn locations.

### 5.29.3.6 GameText MultiStack.MainMenu.titleText

The title text.

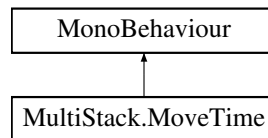
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/MainMenu.cs

## 5.30 MultiStack.MoveTime Class Reference

Responsible for updating the current players move time.

Inheritance diagram for MultiStack.MoveTime:



## Public Attributes

- int [lowOnTimeThreshold](#)  
*The low on time threshold. When the players current time is below this threshold the time will pulse and move to the centre of the screen,*
- Color [normalTimeTextColour](#)  
*The colour of the countdown text when the time is above the [MultiStack.MoveTime.lowOnTimeThreshold](#).*
- Color [lowTimeTextColour](#)  
*The colour of the countdown text when the time is below the [MultiStack.MoveTime.lowOnTimeThreshold](#).*

### 5.30.1 Detailed Description

Responsible for updating the current players move time.

### 5.30.2 Member Data Documentation

#### 5.30.2.1 int MultiStack.MoveTime.lowOnTimeThreshold

The low on time threshold. When the players current time is below this threshold the time will pulse and move to the centre of the screen,

#### 5.30.2.2 Color MultiStack.MoveTime.lowTimeTextColour

The colour of the countdown text when the time is below the [MultiStack.MoveTime.lowOnTimeThreshold](#).

#### 5.30.2.3 Color MultiStack.MoveTime.normalTimeTextColour

The colour of the countdown text when the time is above the [MultiStack.MoveTime.lowOnTimeThreshold](#).

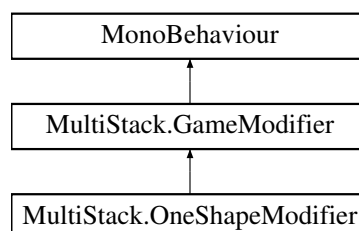
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/MoveTime.cs

## 5.31 MultiStack.OneShapeModifier Class Reference

When enabled only one shape specified by [MultiStack.OneShapeModifier.shape](#) will be spawned for that round.

Inheritance diagram for MultiStack.OneShapeModifier:



## Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*

## Public Attributes

- [Shape shape](#)  
*The sole shape to be spawned this round.*

### 5.31.1 Detailed Description

When enabled only one shape specified by [MultiStack.OneShapeModifier.shape](#) will be spawned for that round.

### 5.31.2 Member Function Documentation

#### 5.31.2.1 override void MultiStack.OneShapeModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.31.2.2 override void MultiStack.OneShapeModifier.Deactivate ( ) [virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

### 5.31.3 Member Data Documentation

#### 5.31.3.1 Shape MultiStack.OneShapeModifier.shape

The sole shape to be spawned this round.

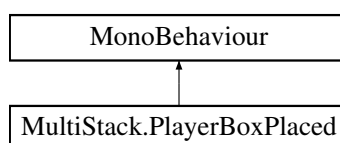
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/OneShapeModifier.cs

## 5.32 MultiStack.PlayerBoxPlaced Class Reference

Used during the number of player selection scene. Handles alerting [MultiStack.MainMenu](#) when a box is placed by invoking [MultiStack.MainMenu.PlayerBoxPlaced](#) and [MultiStack.MainMenu.PlayerBoxRemoved](#).

Inheritance diagram for MultiStack.PlayerBoxPlaced:



### 5.32.1 Detailed Description

Used during the number of player selection scene. Handles alerting [MultiStack.MainMenu](#) when a box is placed by invoking [MultiStack.MainMenu.PlayerBoxPlaced](#) and [MultiStack.MainMenu.PlayerBoxRemoved](#).

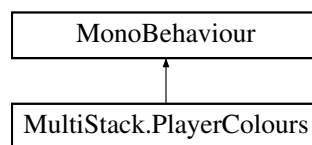
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/PlayerBoxPlaced.cs

## 5.33 MultiStack.PlayerColours Class Reference

Holds the colours for each player.

Inheritance diagram for MultiStack.PlayerColours:



### Public Attributes

- `Color[] colours`

*The colours for each player.*

### 5.33.1 Detailed Description

Holds the colours for each player.

### 5.33.2 Member Data Documentation

#### 5.33.2.1 `Color [] MultiStack.PlayerColours.colours`

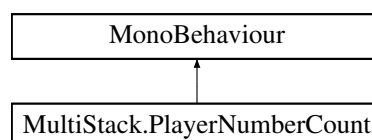
The colours for each player.

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

- MultiplayerStacker/Scripts/UI/PlayerColours.cs

## 5.34 MultiStack.PlayerNumberCount Class Reference

Inheritance diagram for MultiStack.PlayerNumberCount:



## Properties

- int [numberOfPlayers](#) [get, set]  
*Gets or sets the number of players. Used to store the number of players between scenes.*

### 5.34.1 Property Documentation

#### 5.34.1.1 int MultiStack.PlayerNumberCount.numberOfPlayers [get], [set]

Gets or sets the number of players. Used to store the number of players between scenes.

The number of players.

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

- MultiplayerStacker/Scripts/PlayerNumberCount.cs

## 5.35 MultiStack.PlayerPhysicsObject Struct Reference

A structure defining a physics object.

### Public Attributes

- [Shape shape](#)  
*The type of shape this object represents.*
- GameObject [simplePrefab](#)  
*A simple prefab without any of the associated scripts. When the shapes are being looped through and displayed at the beginning of a players turn the simple prefabs are used.*
- GameObject [realPrefab](#)  
*The real prefab. This is the prefab that is spawned once a shape has been selected.*
- float [weight](#)  
*The chance that this object will spawn. The weight is proportional to other shapes weights.*

## Properties

- GameObject [instantiatedPrefab](#) [get, set]  
*Gets or sets the instantiated simple prefab.*

### 5.35.1 Detailed Description

A structure defining a physics object.

### 5.35.2 Member Data Documentation

#### 5.35.2.1 GameObject MultiStack.PlayerPhysicsObject.realPrefab

The real prefab. This is the prefab that is spawned once a shape has been selected.

#### 5.35.2.2 Shape MultiStack.PlayerPhysicsObject.shape

The type of shape this object represents.



### 5.35.2.3 GameObject MultiStack.PlayerPhysicsObject.simplePrefab

A simple prefab without any of the associated scripts. When the shapes are being looped through and displayed at the beginning of a players turn the simple prefabs are used.

### 5.35.2.4 float MultiStack.PlayerPhysicsObject.weight

The chance that this object will spawn. The weight is proportional to other shapes weights.

## 5.35.3 Property Documentation

### 5.35.3.1 GameObject MultiStack.PlayerPhysicsObject.instantiatedPrefab [get], [set]

Gets or sets the instantiated simple prefab.

The instantiated prefab.

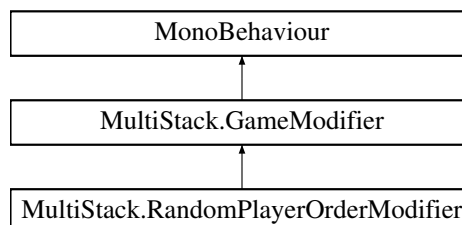
The documentation for this struct was generated from the following file:

- MultiplayerStacker/Scripts/PlayerPhysicsObject.cs

## 5.36 MultiStack.RandomPlayerOrderModifier Class Reference

When enabled the order of players is randomised for this round.

Inheritance diagram for MultiStack.RandomPlayerOrderModifier:



### Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*

### Additional Inherited Members

#### 5.36.1 Detailed Description

When enabled the order of players is randomised for this round.

#### 5.36.2 Member Function Documentation

#### 5.36.2.1 `override void MultiStack.RandomPlayerOrderModifier.Activate ( ) [virtual]`

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.36.2.2 `override void MultiStack.RandomPlayerOrderModifier.Deactivate ( ) [virtual]`

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

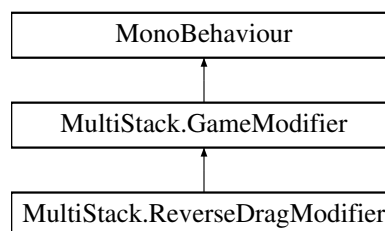
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/Modifiers/RandomPlayerOrderModifier.cs`

## 5.37 MultiStack.ReverseDragModifier Class Reference

When enabled drag is reversed e.g. when the player drags the mouse/finger left the shape moves right.

Inheritance diagram for MultiStack.ReverseDragModifier:



### Public Member Functions

- `override void Activate ( )`  
*Activate this modifier. Called at the beginning of the round.*
- `override void Deactivate ( )`  
*Deactivate this modifier. Called before a new modifier is enabled.*

### Public Attributes

- `ClickHandler clickHandler`

#### 5.37.1 Detailed Description

When enabled drag is reversed e.g. when the player drags the mouse/finger left the shape moves right.

#### 5.37.2 Member Function Documentation

##### 5.37.2.1 `override void MultiStack.ReverseDragModifier.Activate ( ) [virtual]`

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

5.37.2.2 `override void MultiStack.ReverseDragModifier.Deactivate ( ) [virtual]`

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

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

- MultiplayerStacker/Scripts/Modifiers/ReverseDragModifier.cs

## 5.38 MultiStack.ScoreData Class Reference

Class to store serializable height/round data.

### Public Member Functions

- **ScoreData** (int height, int round)

### Properties

- int **height** [get]
- int **round** [get]

#### 5.38.1 Detailed Description

Class to store serializable height/round data.

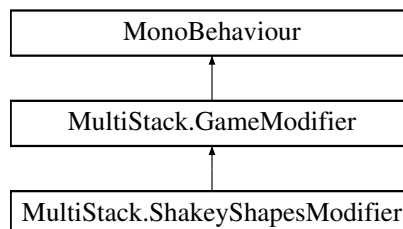
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/High Score/DataPersistence.cs

## 5.39 MultiStack.ShakeyShapesModifier Class Reference

When enabled a random offset is added to a dragged shape each timestep.

Inheritance diagram for MultiStack.ShakeyShapesModifier:



### Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*

## Public Attributes

- [ClickHandler](#) **clickHandler**

### 5.39.1 Detailed Description

When enabled a random offset is added to a dragged shape each timestep.

### 5.39.2 Member Function Documentation

5.39.2.1 `override void MultiStack.ShakeyShapesModifier.Activate ( ) [virtual]`

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

5.39.2.2 `override void MultiStack.ShakeyShapesModifier.Deactivate ( ) [virtual]`

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

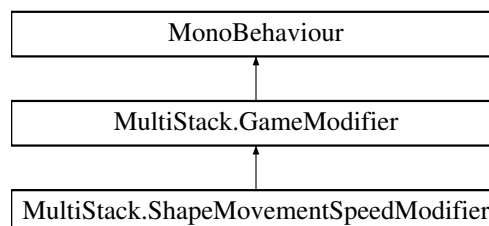
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/ShakeyShapesModifier.cs

## 5.40 MultiStack.ShapeMovementSpeedModifier Class Reference

When enabled the drag speed is changed to `MultiStack.ShapeMovementSpeedModifier.shapeMovementSpeed`.

Inheritance diagram for `MultiStack.ShapeMovementSpeedModifier`:



## Public Member Functions

- `override void Activate ( )`  
*Activate this modifier. Called at the beginning of the round.*
- `override void Deactivate ( )`  
*Deactivate this modifier. Called before a new modifier is enabled.*

## Public Attributes

- [ClickHandler](#) **clickHandler**
- float **shapeMovementSpeed**

### 5.40.1 Detailed Description

When enabled the drag speed is changed to MultiStack.ShapeMovementSpeedModifier.shapeMovementSpeed.

### 5.40.2 Member Function Documentation

#### 5.40.2.1 override void MultiStack.ShapeMovementSpeedModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.40.2.2 override void MultiStack.ShapeMovementSpeedModifier.Deactivate ( ) [virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

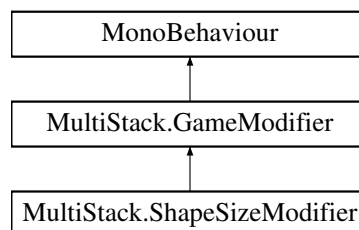
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/ShapeMovementSpeedModifier.cs

## 5.41 MultiStack.ShapeSizeModifier Class Reference

When enabled all newly spawned shapes size is multiplied by MultiStack.ShapeSizeModifier.sizeModifier.

Inheritance diagram for MultiStack.ShapeSizeModifier:



### Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*

### Public Attributes

- float **sizeModifier**

### 5.41.1 Detailed Description

When enabled all newly spawned shapes size is multiplied by MultiStack.ShapeSizeModifier.sizeModifier.

### 5.41.2 Member Function Documentation

#### 5.41.2.1 `override void MultiStack.ShapeSizeModifier.Activate ( ) [virtual]`

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.41.2.2 `override void MultiStack.ShapeSizeModifier.Deactivate ( ) [virtual]`

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

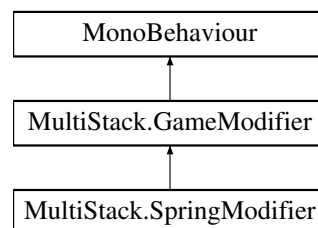
The documentation for this class was generated from the following file:

- `MultiplayerStacker/Scripts/Modifiers/ShapeSizeModifier.cs`

## 5.42 MultiStack.SpringModifier Class Reference

When enabled the shapes are attached to springs when being dragged. This results in a harder to control shape.

Inheritance diagram for `MultiStack.SpringModifier`:



### Public Member Functions

- `override void Activate ( )`  
*Activate this modifier. Called at the beginning of the round.*
- `override void Deactivate ( )`  
*Deactivate this modifier. Called before a new modifier is enabled.*

### Public Attributes

- `ClickHandler clickHandler`

### 5.42.1 Detailed Description

When enabled the shapes are attached to springs when being dragged. This results in a harder to control shape.

### 5.42.2 Member Function Documentation

#### 5.42.2.1 `override void MultiStack.SpringModifier.Activate ( ) [virtual]`

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

## 5.42.2.2 override void MultiStack.SpringModifier.Deactivate ( ) [virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

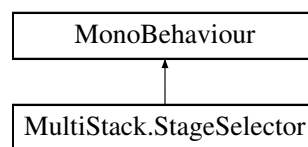
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/SpringModifier.cs

## 5.43 MultiStack.StageSelector Class Reference

Used to select a stage for the game. A random stage is selected at the beginning of each game.

Inheritance diagram for MultiStack.StageSelector:



### Public Member Functions

- void [CallBackOnStageComplete](#) ([CallBack](#) callBack)  
*Injects a method to be invoked when the stage spawn has completed.*
- void [SpawnStage](#) ()  
*Begins the stage spawning process. Updates the UI with [MultiStack.StageSelector.stageText](#), loops through the stages and spawns the final stage. Invokes callback method set by [MultiStack.StageSelector.CallBackOnStageComplete](#) if present.*

### Public Attributes

- [GameText](#) [infoText](#)  
*Used to display a message at the beginning of the stage spawn process.*
- string [stageText](#) = "What stage will it be this time?"  
*The message shown when before stage spawning begins.*
- [GameObject\[\]](#) [stagePrefabs](#)  
*The stage prefabs.*

### Properties

- bool [stageSpawned](#) [get]  
*Gets a value indicating whether this [MultiStack.StageSelector](#) has spawned a stage.*

#### 5.43.1 Detailed Description

Used to select a stage for the game. A random stage is selected at the beginning of each game.

### 5.43.2 Member Function Documentation

#### 5.43.2.1 void MultiStack.StageSelector.CallBackOnStageComplete ( *CallBack* *callBack* )

Injects a method to be invoked when the stage spawn has completed.



## Parameters

<i>callBack</i>	Call back.
-----------------	------------

## 5.43.2.2 void MultiStack.StageSelector.SpawnStage ( )

Begins the stage spawning process. Updates the UI with [MultiStack.StageSelector.stageText](#), loops through the stages and spawns the final stage. Invokes callback method set by [MultiStack.StageSelector.CallBackOnStageComplete](#) if present.

## 5.43.3 Member Data Documentation

## 5.43.3.1 GameText MultiStack.StageSelector.infoText

Used to display a message at the beginning of the stage spawn process.

## 5.43.3.2 GameObject [ ] MultiStack.StageSelector.stagePrefabs

The stage prefabs.

## 5.43.3.3 string MultiStack.StageSelector.stageText = "What stage will it be this time?"

The message shown when before stage spawning begins.

## 5.43.4 Property Documentation

## 5.43.4.1 bool MultiStack.StageSelector.stageSpawned [get]

Gets a value indicating whether this [MultiStack.StageSelector](#) has spawned a stage.

true if stage spawned; otherwise, false.

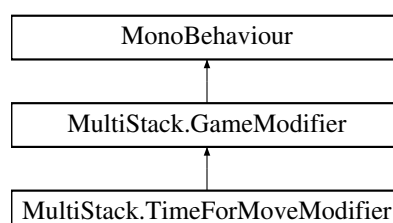
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Managers/StageSelector.cs

## 5.44 MultiStack.TimeForMoveModifier Class Reference

When enabled the time a player has to complete their turn is changed to [MultiStack.TimeForMoveModifier.changedTime](#).

Inheritance diagram for MultiStack.TimeForMoveModifier:



## Public Member Functions

- override void [Activate](#) ()  
*Activate this modifier. Called at the beginning of the round.*
- override void [Deactivate](#) ()  
*Deactivate this modifier. Called before a new modifier is enabled.*

## Public Attributes

- int [changedTime](#) = 15  
*The new move time for this round.*

### 5.44.1 Detailed Description

When enabled the time a player has to complete their turn is changed to [MultiStack.TimeForMoveModifier.changedTime](#).

### 5.44.2 Member Function Documentation

#### 5.44.2.1 override void MultiStack.TimeForMoveModifier.Activate ( ) [virtual]

Activate this modifier. Called at the beginning of the round.

Implements [MultiStack.GameModifier](#).

#### 5.44.2.2 override void MultiStack.TimeForMoveModifier.Deactivate ( ) [virtual]

Deactivate this modifier. Called before a new modifier is enabled.

Implements [MultiStack.GameModifier](#).

### 5.44.3 Member Data Documentation

#### 5.44.3.1 int MultiStack.TimeForMoveModifier.changedTime = 15

The new move time for this round.

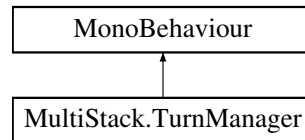
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Modifiers/TimeForMoveModifier.cs

## 5.45 MultiStack.TurnManager Class Reference

Handles player turns and spawning of player physics objects. Manages and maintains a list of spawned physics objects. Also handles applying certain [MultiStack.GameModifier](#) e.g. when [MultiStack.ExplosiveShapeModifier](#) is applied, this class will loop through the spawned shape list and convert one shape into an explosive shape.

Inheritance diagram for MultiStack.TurnManager:



## Public Member Functions

- void [Initialise](#) (int numOfPlayers)  
*Sets number of players. Loads [MultiStack.TurnManager.physicsObjects](#).*
- void [ChangeShapeToGlass](#) ()  
*Changes a shape to glass. The most recent shape that can be turn into glass is selected.*
- void [ChangeShapeToExplosive](#) ()  
*Changes a shape to explosive. The most recent shape that can be turned into an explosive is selected.*
- void [ObjectPickedUp](#) (Rigidbody2D obj)  
*Specifies that an object has been picked up. This is used to help decide if the current player has finished their turn.*
- void [ObjectDropped](#) (Rigidbody2D obj)  
*Specifies that an object has been picked dropped. This is used to help decide if the current player has finished their turn.*
- void [StartNewRound](#) ()  
*Starts a new round, increments current round counter and begins a new turn if not gameover.*
- void [ApplyGravityModifier](#) (float modifier)  
*Loops through each spawned physics object and multiplies the gravvity scale by the modifier.*
- void [DisableGravityModifier](#) ()  
*Disables the gravity modifier. Resets each spawned physics object gravity scale.*
- void [ApplySizeModifier](#) (float modifier)  
*Applies a size modifier to each spawned physics object for this round.*
- void [DisableSizeModifier](#) ()  
*Disables the size modifier.*
- void [ApplyShapeModifier](#) (Shape shape)  
*When invoked only the specified shape will be spawned this round.*
- void [DisableShapeModifier](#) ()  
*Disables the shape modifier. Any type of shape will be spawned next round.*
- void [ApplyCatchTheShapeModifier](#) ()  
*Applies the catch the shape modifier. When this is activated, when a shape is spawned it is dropped and the player has to catch it before it falls.*
- void [DisableCatchTheShapeModifier](#) ()  
*Disables the catch the shape modifier.*

## Public Attributes

- Transform[] [playerLocations](#)  
*The player locations where the plays shape will spawn.*
- [PlayerPhysicsObject](#)[] [physicsObjects](#)  
*The physics objects that can be spawned.*
- [GameText](#) [playerText](#)  
*The UI that will inform the player it is their turn.*
- [GameText](#) [timeRemainingText](#)  
*The UI that shows the current players time remaining for their turn.*
- [PlayerColours](#) [playerColours](#)  
*The player colours. The [MultiStack.TurnManager.playerText](#) UI is shown in the current players colour.*
- int [baseTimeForMove](#) = 20  
*The base tim (without modifiers) that each player has to complete their turn.*

## Properties

- int [currentRound](#) [get]  
*The current round number.*
- int [currentEnhancedHeight](#) [get]  
*Gets the height of the current stack of physics objects + 4f. This is used for the UI.*
- float [shapeOffsetHeight](#) [get]  
*Gets the height of the shape stack offset. Used by the [MultiStack.CameraManager](#) to limit how far the camera can scroll upwards.*
- int [numOfObjectsSpawned](#) [get]  
*The number of physics objects in the current scene.*
- bool [explosiveSpriteAvailableForSpawnedObject](#) [get]  
*Gets a value indicating whether this [MultiStack.TurnManager](#) has spawned a physics object that can be turned into an explosive object.*
- bool [glassSpriteAvailableForSpawnedObject](#) [get]  
*Gets a value indicating whether this [MultiStack.TurnManager](#) has spawned an object that can be turned into a glass object.*
- bool [randomPlayerOrder](#) [set]  
*Sets a value indicating whether this [MultiStack.TurnManager](#) should shuffle the players for the next round.*
- int [currentPlayer](#) [get]  
*The index of the current player.*
- bool [shouldUpdate](#) [set]  
*Sets a value indicating whether this [MultiStack.TurnManager](#) should update.*
- static [TurnManager instance](#) [get]  
*Singleton pattern. Gets the instance. Accessible from any class.*

### 5.45.1 Detailed Description

Handles player turns and spawning of player physics objects. Manages and maintains a list of spawned physics objects. Also handles applying certain [MultiStack.GameModifier](#) e.g. when [MultiStack.ExplosiveShape↔Modifier](#) is applied, this class will loop through the spawned shape list and convert one shape into an explosive shape.

### 5.45.2 Member Function Documentation

#### 5.45.2.1 void MultiStack.TurnManager.ApplyCatchTheShapeModifier ( )

Applies the catch the shape modifier. When this is activated, when a shape is spawned it is dropped and the player has to catch it before it falls.

#### 5.45.2.2 void MultiStack.TurnManager.ApplyGravityModifier ( float *modifier* )

Loops through each spawned physics object and multiplies the gravity scale by the modifier.

##### Parameters

<i>modifier</i>	Modifier.
-----------------	-----------

#### 5.45.2.3 void MultiStack.TurnManager.ApplyShapeModifier ( Shape *shape* )

When invoked only the specified shape will be spawned this round.

## Parameters

<i>shape</i>	Shape.
--------------	--------

5.45.2.4 void MultiStack.TurnManager.ApplySizeModifier ( float *modifier* )

Applies a size modifier to each spawned physics object for this round.

## Parameters

<i>modifier</i>	Modifier.
-----------------	-----------

## 5.45.2.5 void MultiStack.TurnManager.ChangeShapeToExplosive ( )

Changes a shape to explosive. The most recent shape that can be turned into an explosive is selected.

## 5.45.2.6 void MultiStack.TurnManager.ChangeShapeToGlass ( )

Changes a shape to glass. The most recent shape that can be turn into glass is selected.

## 5.45.2.7 void MultiStack.TurnManager.DisableCatchTheShapeModifier ( )

Disables the catch the shape modifier.

## 5.45.2.8 void MultiStack.TurnManager.DisableGravityModifier ( )

Disables the gravity modifier. Resets each spawned physics object gravity scale.

## 5.45.2.9 void MultiStack.TurnManager.DisableShapeModifier ( )

Disables the shape modifier. Any type of shape will be spawned next round.

## 5.45.2.10 void MultiStack.TurnManager.DisableSizeModifier ( )

Disables the size modifier.

5.45.2.11 void MultiStack.TurnManager.Initialise ( int *numOfPlayers* )

Sets number of players. Loads [MultiStack.TurnManager.physicsObjects](#).

## Parameters

<i>numOfPlayers</i>	Number of players.
---------------------	--------------------

5.45.2.12 void MultiStack.TurnManager.ObjectDropped ( Rigidbody2D *obj* )

Specifies that an object has been picked dropped. This is used to help decide if the current player has finished their turn.

## Parameters

<i>obj</i>	Object.
------------	---------

5.45.2.13 void MultiStack.TurnManager.ObjectPickedUp ( Rigidbody2D *obj* )

Specifies that an object has been picked up. This is used to help decide if the current player has finished their turn.

## Parameters

<i>obj</i>	Object.
------------	---------

## 5.45.2.14 void MultiStack.TurnManager.StartNewRound ( )

Starts a new round, increments current round counter and begins a new turn if not gameover.

## 5.45.3 Member Data Documentation

## 5.45.3.1 int MultiStack.TurnManager.baseTimeForMove = 20

The base tim (without modifiers) that each player has to complete their turn.

## 5.45.3.2 PlayerPhysicsObject [ ] MultiStack.TurnManager.physicsObjects

The physics objects that can be spawned.

## 5.45.3.3 PlayerColours MultiStack.TurnManager.playerColours

The player colours. The [MultiStack.TurnManager.playerText](#) UI is shown in the current players colour.

## 5.45.3.4 Transform [ ] MultiStack.TurnManager.playerLocations

The player locations where the plays shape will spawn.

## 5.45.3.5 GameText MultiStack.TurnManager.playerText

The UI that will inform the player it is their turn.

## 5.45.3.6 GameText MultiStack.TurnManager.timeRemainingText

The UI that shows the current players time remaining for their turn.

## 5.45.4 Property Documentation

## 5.45.4.1 int MultiStack.TurnManager.currentEnhancedHeight [get]

Gets the height of the current stack of physics objects + 4f. This is used for the UI.

The height of the current.

**5.45.4.2** `int MultiStack.TurnManager.currentPlayer` `[get]`

The index of the current player.

The current player.

**5.45.4.3** `int MultiStack.TurnManager.currentRound` `[get]`

The current round number.

The current round.

**5.45.4.4** `bool MultiStack.TurnManager.explosiveSpriteAvailableForSpawnedObject` `[get]`

Gets a value indicating whether this [MultiStack.TurnManager](#) has spawned a physics object that can be turned into an explosive object.

`true` if explosive sprite available for spawned object; otherwise, `false`.

**5.45.4.5** `bool MultiStack.TurnManager.glassSpriteAvailableForSpawnedObject` `[get]`

Gets a value indicating whether this [MultiStack.TurnManager](#) has spawned an object that can be turned into a glass object.

`true` if glass sprite available for spawned object; otherwise, `false`.

**5.45.4.6** `TurnManager MultiStack.TurnManager.instance` `[static], [get]`

Singleton pattern. Gets the instance. Accessible from any class.

The instance.

**5.45.4.7** `int MultiStack.TurnManager.numOfObjectsSpawned` `[get]`

The number of physics objects in the current scene.

The number of objects spawned.

**5.45.4.8** `bool MultiStack.TurnManager.randomPlayerOrder` `[set]`

Sets a value indicating whether this [MultiStack.TurnManager](#) should shuffle the players for the next round.

`true` if random player order; otherwise, `false`.

**5.45.4.9** `float MultiStack.TurnManager.shapeOffsetHeight` `[get]`

Gets the height of the shape stack offset. Used by the [MultiStack.CameraManager](#) to limit how far the camera can scroll upwards.

The height of the shape offset.

**5.45.4.10** `bool MultiStack.TurnManager.shouldUpdate` `[set]`

Sets a value indicating whether this [MultiStack.TurnManager](#) should update.

`true` if should update; otherwise, `false`.

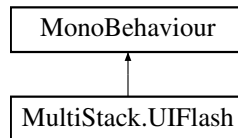
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/Managers/TurnManager.cs

## 5.46 MultiStack.UIFlash Class Reference

User interface flash. Acts as an overlay for the main menu and gameplay scene.

Inheritance diagram for MultiStack.UIFlash:



### Public Member Functions

- void [CallbackOnUIFlashComplete](#) ([Callback](#) callback)  
Add a callback delegate to be invoked when the UI flash is complete.
- void [GameOverUIFlashInSeconds](#) (float seconds)  
Games the over user interface flash.

### Public Attributes

- bool [isMenu](#)  
Overlay behaviour is different for menu and game scene. For menu, the overlay is less translucent.

#### 5.46.1 Detailed Description

User interface flash. Acts as an overlay for the main menu and gameplay scene.

#### 5.46.2 Member Function Documentation

##### 5.46.2.1 void MultiStack.UIFlash.CallbackOnUIFlashComplete ( [Callback](#) callback )

Add a callback delegate to be invoked when the UI flash is complete.

Parameters

<i>callback</i>	Callback.
-----------------	-----------

##### 5.46.2.2 void MultiStack.UIFlash.GameOverUIFlashInSeconds ( float *seconds* )

Games the over user interface flash.

#### 5.46.3 Member Data Documentation

##### 5.46.3.1 bool MultiStack.UIFlash.isMenu

Overlay behaviour is different for menu and game scene. For menu, the overlay is less translucent.



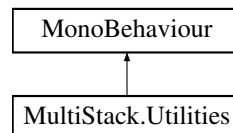
The documentation for this class was generated from the following file:

- MultiplayerStacker/Scripts/UI/UIFlash.cs

## 5.47 MultiStack.Utilities Class Reference

Useful methods used by a number of classes.

Inheritance diagram for MultiStack.Utilities:



### Public Member Functions

- Quaternion [GetRandomRotation2D](#) ()  
*Gets a random 2d rotation (z-axis).*
- void [InvokeMethodEverySeconds](#) ([Callback](#) method, float seconds)  
*Invokes the delegate method at a time interval specified by seconds.*

### Properties

- static [Utilities instance](#) [get]  
*Gets the instance of this class. Only one instance exists. Provides static access from any class.*

#### 5.47.1 Detailed Description

Useful methods used by a number of classes.

#### 5.47.2 Member Function Documentation

##### 5.47.2.1 Quaternion MultiStack.Utilities.GetRandomRotation2D ( )

Gets a random 2d rotation (z-axis).

##### Returns

The random rotation.

##### 5.47.2.2 void MultiStack.Utilities.InvokeMethodEverySeconds ( [Callback](#) method, float seconds )

Invokes the delegate method at a time interval specified by seconds.

##### Parameters

<i>method</i>	Method.
<i>seconds</i>	Time between each method call.

### 5.47.3 Property Documentation

#### 5.47.3.1 Utilities `MultiStack.Utilities.instance` `[static],[get]`

Gets the instance of this class. Only one instance exists. Provides static access from any class.

The instance.

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

- `MultiplayerStacker/Scripts/Helpers/Utilities.cs`

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