

SIMPLE MOBILE ARCADE GAME

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Brick Rush



Important links

- Release
- License
- Documentation

Abstract

Brick Rush is simple mobile arcade game. The goal of the game is to stop as many falling bricks as possible. Each accurate action guarantees extra point.

Features

The list below presents most important properties:

- · Endless progressive game stages.
- Personal account assigned to the user device.
- · Global networked leaderboard.

2 Brick Rush

Game visualization

The pictures below show the most important aspects of the program:



Figure 1.1 Splash Screen

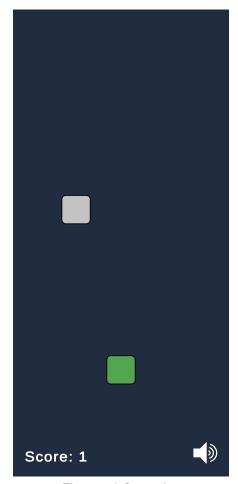


Figure 1.2 Gameplay

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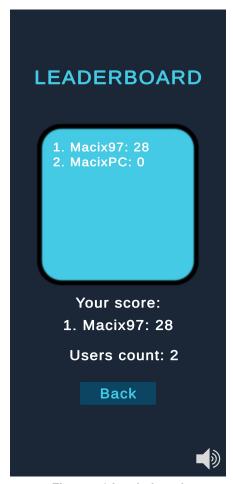


Figure 1.3 Leaderboard



Figure 1.4 Game Over

Used technologies

The list of used solutions:

- Unity 2022.3.16f1 Efficient and expanded game engine.
- Visual Studio Code 1.88.1 Primary, lightweight IDE.
- GIMP 2.10 Open source image editor.

Credits

The author of the project have using some arts shared by CC0 or CC BY license. Without this support, the game would not be possible. A complete list of the used materials and their creators can be found in the credits text file. Moreover, many free resources from the unity asset store were included.

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Hierarchical Index

2.1 Class Hierarchy

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

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Class Index

3.1 Class List

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

AccountWindow
AudioManager
BrickComponent
CameraManager
CollectionExtensions
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File Index

4.1 File List

Here is a list of all files with brief descriptions:

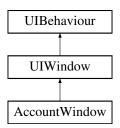
Assets/Scripts/AccountWindow.cs
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Assets/Scripts/UIWindow.cs
Assets/Scripts/UserComparator.cs

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Class Documentation

5.1 AccountWindow Class Reference

Inheritance diagram for AccountWindow:



Protected Member Functions

- override void Awake ()
- override void Start ()

Private Member Functions

- void OnCreateButtonClicked ()
- void OnNameInputFieldChanged (string text)

Private Attributes

- Button createButton
- TMP_InputField nameInputField
- TextMeshProUGUI failText

Additional Inherited Members

5.1.1 Member Function Documentation

5.1.1.1 Awake()

```
override void AccountWindow.Awake ( ) [protected]
```

5.1.1.2 OnCreateButtonClicked()

```
void AccountWindow.OnCreateButtonClicked ( ) [private]
```

5.1.1.3 OnNameInputFieldChanged()

5.1.1.4 Start()

```
override void AccountWindow.Start ( ) [protected]
```

5.1.2 Member Data Documentation

5.1.2.1 createButton

```
Button AccountWindow.createButton [private]
```

5.1.2.2 failText

```
TextMeshProUGUI AccountWindow.failText [private]
```

5.1.2.3 nameInputField

```
TMP_InputField AccountWindow.nameInputField [private]
```

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

Assets/Scripts/AccountWindow.cs

5.2 AudioManager Class Reference

Static Public Member Functions

- static void ToggleAudioVolume ()
- static void SetAudioPause (bool isPause)
- static void SetAudioVolume (float volume)

Events

- static Action< bool > OnAudioPauseChanged
- static Action< float > OnAudioVolumeChanged

5.2.1 Member Function Documentation

5.2.1.1 SetAudioPause()

5.2.1.2 SetAudioVolume()

5.2.1.3 ToggleAudioVolume()

```
static void AudioManager.ToggleAudioVolume ( ) [static]
```

5.2.2 Event Documentation

5.2.2.1 OnAudioPauseChanged

```
Action<br/>
Action<br/>
AudioManager.OnAudioPauseChanged [static]
```

5.2.2.2 OnAudioVolumeChanged

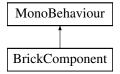
Action<float> AudioManager.OnAudioVolumeChanged [static]

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

• Assets/Scripts/AudioManager.cs

5.3 BrickComponent Class Reference

Inheritance diagram for BrickComponent:



Public Member Functions

• void SetState (BrickState newState)

Properties

- BrickState State [get]
- SpriteRenderer SpriteRenderer [get]

Events

• static Action < BrickComponent > OnStateChanged

Private Member Functions

- · void Awake ()
- void OnEnable ()
- void OnDisable ()
- · void OnUpdate ()
- void OnMouseDown ()
- void OnBecameInvisible ()
- void OnParticleSystemStopped ()
- void OnLevelStateChanged (LevelState levelState)
- void OnDeactivatingState ()
- void OnFallingState ()
- void OnHiddenState ()
- void SetHiddenState ()
- void UpdatePosition ()

Private Attributes

- float hidingDelay = 1.0f
- SpriteRenderer spriteRenderer
- new Collider2D collider
- new ParticleSystem particleSystem
- float velocity
- float currentSpeed
- float targetSpeed
- · BrickState state
- Transform bodyTransform

5.3.1 Member Function Documentation

5.3.1.1 Awake()

```
void BrickComponent.Awake ( ) [private]
```

5.3.1.2 OnBecameInvisible()

void BrickComponent.OnBecameInvisible () [private]

5.3.1.3 OnDeactivatingState()

void BrickComponent.OnDeactivatingState () [private]

5.3.1.4 OnDisable()

void BrickComponent.OnDisable () [private]

5.3.1.5 OnEnable()

void BrickComponent.OnEnable () [private]

5.3.1.6 OnFallingState()

```
void BrickComponent.OnFallingState ( ) [private]
```

5.3.1.7 OnHiddenState()

```
void BrickComponent.OnHiddenState ( ) [private]
```

5.3.1.8 OnLevelStateChanged()

```
\begin{tabular}{ll} \begin{tabular}{ll} void & BrickComponent.OnLevelStateChanged ( \\ & LevelState & levelState \end{tabular} \begin{tabular}{ll} \begin{tabular}{ll} LevelState & levelState \end{tabular} \begin{tabular}{ll} \begin{tabular}{ll} \begin{tabular}{ll} LevelState & levelState \end{tabular} \begin{tabular}{ll} \b
```

5.3.1.9 OnMouseDown()

```
void BrickComponent.OnMouseDown ( ) [private]
```

5.3.1.10 OnParticleSystemStopped()

```
void BrickComponent.OnParticleSystemStopped ( ) [private]
```

5.3.1.11 OnUpdate()

```
void BrickComponent.OnUpdate ( ) [private]
```

5.3.1.12 SetHiddenState()

```
void BrickComponent.SetHiddenState ( ) [private]
```

5.3.1.13 SetState()

5.3.1.14 UpdatePosition()

```
void BrickComponent.UpdatePosition ( ) [private]
```

5.3.2 Member Data Documentation

5.3.2.1 bodyTransform

Transform BrickComponent.bodyTransform [private]

5.3.2.2 collider

new Collider2D BrickComponent.collider [private]

5.3.2.3 currentSpeed

float BrickComponent.currentSpeed [private]

5.3.2.4 hidingDelay

float BrickComponent.hidingDelay = 1.0f [private]

5.3.2.5 particleSystem

new ParticleSystem BrickComponent.particleSystem [private]

5.3.2.6 spriteRenderer

SpriteRenderer BrickComponent.spriteRenderer [private]

5.3.2.7 state

BrickState BrickComponent.state [private]

5.3.2.8 targetSpeed

float BrickComponent.targetSpeed [private]

5.3.2.9 velocity

float BrickComponent.velocity [private]

5.3.3 Property Documentation

5.3.3.1 SpriteRenderer

SpriteRenderer BrickComponent.SpriteRenderer [get]

5.3.3.2 State

BrickState BrickComponent.State [get]

5.3.4 Event Documentation

5.3.4.1 OnStateChanged

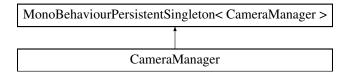
Action < BrickComponent > BrickComponent.OnStateChanged [static]

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

· Assets/Scripts/BrickComponent.cs

5.4 CameraManager Class Reference

Inheritance diagram for CameraManager:



Static Public Member Functions

- static Vector2 GetRightTopScreenPosition ()
- static Vector3 GetCenterTopWorldPosition ()
- static Vector2 GetScreenSize (Renderer renderer)
- static Vector2 GetScreenSize (Bounds bounds)

Protected Member Functions

• override void Awake ()

Properties

• static Camera MainCamera [get]

Private Attributes

· Camera mainCamera

Static Private Attributes

- static readonly Vector2 centerTopViewport = new(0.5F, 1.0F)
- static readonly Vector2 rightTopViewport = new(1.0F, 1.0F)

5.4.1 Member Function Documentation

5.4.1.1 Awake()

```
override void CameraManager.Awake ( ) [protected]
```

5.4.1.2 GetCenterTopWorldPosition()

```
static Vector3 CameraManager.GetCenterTopWorldPosition ( ) [static]
```

5.4.1.3 GetRightTopScreenPosition()

```
static Vector2 CameraManager.GetRightTopScreenPosition ( ) [static]
```

5.4.1.4 GetScreenSize() [1/2]

5.4.1.5 GetScreenSize() [2/2]

5.4.2 Member Data Documentation

5.4.2.1 centerTopViewport

```
readonly Vector2 CameraManager.centerTopViewport = new(0.5F, 1.0F) [static], [private]
```

5.4.2.2 mainCamera

```
Camera CameraManager.mainCamera [private]
```

5.4.2.3 rightTopViewport

```
readonly Vector2 CameraManager.rightTopViewport = new(1.0F, 1.0F) [static], [private]
```

5.4.3 Property Documentation

5.4.3.1 MainCamera

```
Camera CameraManager.MainCamera [static], [get], [private]
```

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

• Assets/Scripts/CameraManager.cs

5.5 CollectionExtensions Class Reference

Static Public Member Functions

```
static void Shuffle< T > (this IList< T > list)
static T First< T > (this IList< T > list)
static void Push< T > (this List< T > list, T element)
static T Random< T > (this IList< T > list)
static T Random< T > (this List< T > list, bool remove=false)
static void SetAsFirst< T > (this IList< T > list, T element)
static void SetAsFirst< T > (this IList< T > list, int index)
```

5.5.1 Member Function Documentation

5.5.1.1 First< T >()

5.5.1.2 **Push**< T>()

5.5.1.3 Random< T > () [1/2]

```
static T CollectionExtensions.Random<br/>< T > ( this IList<br/>T > list) [static]
```

5.5.1.4 Random< T >() [2/2]

5.5.1.5 SetAsFirst< T >() [1/2]

```
static void CollectionExtensions.SetAsFirst< T > ( this IList< T > list, int index ) [static]
```

5.5.1.6 SetAsFirst< T >() [2/2]

```
static void CollectionExtensions.SetAsFirst< T > ( this IList< T > list, T element ) [static]
```

5.5.1.7 Shuffle< T >()

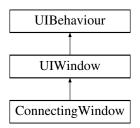
```
static void CollectionExtensions.Shuffle< T > ( this IList< T > list ) [static]
```

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

• Assets/Scripts/CollectionExtensions.cs

5.6 ConnectingWindow Class Reference

Inheritance diagram for ConnectingWindow:



Additional Inherited Members

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

Assets/Scripts/ConnectingWindow.cs

5.7 CoroutineUtils Class Reference

Static Public Member Functions

- static IEnumerator WaitForSeconds (float time)
- static IEnumerator WaitForSecondsRealtime (float time)
- static IEnumerator WaitForCompletion (this Task task)

5.7.1 Member Function Documentation

5.7.1.1 WaitForCompletion()

```
static IEnumerator CoroutineUtils.WaitForCompletion ( this \ Task \ task \ ) \quad [static]
```

5.7.1.2 WaitForSeconds()

```
static IEnumerator CoroutineUtils.WaitForSeconds (  float \ \textit{time} \ ) \ \ [static]
```

5.7.1.3 WaitForSecondsRealtime()

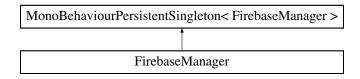
```
static IEnumerator CoroutineUtils.WaitForSecondsRealtime ( float \ time \ ) \ \ [static]
```

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

• Assets/Scripts/CoroutineUtils.cs

5.8 FirebaseManager Class Reference

Inheritance diagram for FirebaseManager:



Static Public Member Functions

- static void CheckIsUserAsync (Action < bool > callback=null)
- static void CreateAccountAsync (string userName, Action < bool > callback=null)
- static void GetAllUsersAsync (List< FirebaseUser > users, Action callback=null)
- static void GetUserScoreAsync (Action< int > callback=null)
- static void SetUserScoreAsync (int score, Action < bool > callback=null)

Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Properties

- static string UserID [get]
- static FirebaseUser UserData [get]
- DatabaseReference UsersReference [get]

Events

static Action OnDatabaseChanged

Private Member Functions

- IEnumerator OnCreatingAccount (string userName, Action < bool > callback)
- IEnumerator OnCheckingUser (Action< bool > callback)
- $\bullet \ \ \mathsf{IEnumerator} \ \mathsf{OnGettingAllUsers} \ (\mathsf{List} {<} \ \mathsf{FirebaseUser} > \mathsf{users}, \ \mathsf{Action} \ \mathsf{callback})$
- IEnumerator OnGettingUserScore (Action< int > callback)
- IEnumerator OnSettingUserScore (int score, Action < bool > callback)
- bool IsUserNameValid (string userName, DataSnapshot snapshot)
- void OnDatabaseValueChanged (object sender, ValueChangedEventArgs args)

Private Attributes

- string databaseURL
- string usersPath = "users"
- string userID
- · FirebaseUser userData
- DatabaseReference databaseReference
- readonly Dictionary < string, object > userDictionary = new()

5.8.1 Member Function Documentation

5.8.1.1 Awake()

```
override void FirebaseManager.Awake ( ) [protected]
```

5.8.1.2 CheckIsUserAsync()

```
static void FirebaseManager.CheckIsUserAsync ( \label{eq:checkIsUserAsync} \mbox{Action< bool} > callback = null \mbox{)} \mbox{ [static]}
```

5.8.1.3 CreateAccountAsync()

5.8.1.4 GetAllUsersAsync()

```
static void FirebaseManager.GetAllUsersAsync (  \label{eq:List} {\tt List} < {\tt FirebaseUser} > users, \\ {\tt Action} \ callback = null \ ) \ \ [{\tt static}]
```

5.8.1.5 GetUserScoreAsync()

```
static void FirebaseManager.GetUserScoreAsync ( \label{eq:Action} \mbox{Action} < \mbox{int} > \mbox{\it callback} = \mbox{\it null} \; ) \; \; [\mbox{\it static}]
```

5.8.1.6 IsUserNameValid()

```
bool FirebaseManager.IsUserNameValid ( string\ userName, DataSnapshot\ snapshot\ )\ \ [private]
```

5.8.1.7 OnCheckingUser()

```
\label{lem:conclusion} \begin{tabular}{ll} {\tt IEnumerator FirebaseManager.OnCheckingUser (} \\ {\tt Action<\ bool\ >\ \it callback\ )} & \begin{tabular}{ll} {\tt [private]} \\ \end{tabular}
```

5.8.1.8 OnCreatingAccount()

```
IEnumerator FirebaseManager.OnCreatingAccount ( string \ userName, Action < bool > callback ) \ [private]
```

5.8.1.9 OnDatabaseValueChanged()

```
void FirebaseManager.OnDatabaseValueChanged ( object\ sender, ValueChangedEventArgs\ args\ ) \quad [private]
```

5.8.1.10 OnDestroy()

```
override void FirebaseManager.OnDestroy ( ) [protected]
```

5.8.1.11 OnGettingAllUsers()

5.8.1.12 OnGettingUserScore()

5.8.1.13 OnSettingUserScore()

```
IEnumerator FirebaseManager.OnSettingUserScore ( int \ score, Action < bool > callback ) \ [private]
```

5.8.1.14 SetUserScoreAsync()

5.8.2 Member Data Documentation

5.8.2.1 databaseReference

DatabaseReference FirebaseManager.databaseReference [private]

5.8.2.2 databaseURL

```
string FirebaseManager.databaseURL [private]
```

5.8.2.3 userData

FirebaseUser FirebaseManager.userData [private]

5.8.2.4 userDictionary

readonly Dictionary<string, object> FirebaseManager.userDictionary = new() [private]

5.8.2.5 userID

```
string FirebaseManager.userID [private]
```

5.8.2.6 usersPath

```
string FirebaseManager.usersPath = "users" [private]
```

5.8.3 Property Documentation

5.8.3.1 UserData

```
FirebaseUser FirebaseManager.UserData [static], [get]
```

5.8.3.2 UserID

```
string FirebaseManager.UserID [static], [get]
```

5.8.3.3 UsersReference

DatabaseReference FirebaseManager.UsersReference [get], [private]

5.8.4 Event Documentation

5.8.4.1 OnDatabaseChanged

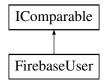
```
Action FirebaseManager.OnDatabaseChanged [static]
```

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

• Assets/Scripts/FirebaseManager.cs

5.9 FirebaseUser Struct Reference

Inheritance diagram for FirebaseUser:



Public Member Functions

- FirebaseUser (string name)
- FirebaseUser (object keyValuePairs)
- readonly Dictionary< string, object > GetDictionary (Dictionary< string, object > dictionary)
- void SetName (string name)
- int CompareTo (object instance)

Static Public Attributes

- const string NameKey = nameof(name)
- const string ScoreKey = nameof(score)

Properties

- readonly string Name [get]
- readonly int Score [get]

Private Attributes

- string name
- int score

5.9.1 Constructor & Destructor Documentation

5.9.1.1 FirebaseUser() [1/2]

5.9.1.2 FirebaseUser() [2/2]

5.9.2 Member Function Documentation

5.9.2.1 CompareTo()

5.9.2.2 GetDictionary()

```
readonly Dictionary<br/>< string, object > FirebaseUser.
GetDictionary (<br/> Dictionary<br/>< string, object > dictionary)
```

5.9.2.3 SetName()

5.9.3 Member Data Documentation

5.9.3.1 name

```
string FirebaseUser.name [private]
```

5.9.3.2 NameKey

```
const string FirebaseUser.NameKey = nameof(name) [static]
```

5.9.3.3 score

```
int FirebaseUser.score [private]
```

5.9.3.4 ScoreKey

```
const string FirebaseUser.ScoreKey = nameof(score) [static]
```

5.9.4 Property Documentation

5.9.4.1 Name

readonly string FirebaseUser.Name [get]

5.9.4.2 Score

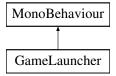
```
readonly int FirebaseUser.Score [get]
```

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

• Assets/Scripts/FirebaseUser.cs

5.10 GameLauncher Class Reference

Inheritance diagram for GameLauncher:



Private Member Functions

• IEnumerator Start ()

Private Attributes

• float splashScreenTime = 2.0f

5.10.1 Member Function Documentation

5.10.1.1 Start()

IEnumerator GameLauncher.Start () [private]

5.10.2 Member Data Documentation

5.10.2.1 splashScreenTime

```
float GameLauncher.splashScreenTime = 2.0f [private]
```

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

· Assets/Scripts/GameLauncher.cs

5.11 GameManager Class Reference

Inheritance diagram for GameManager:



Static Public Member Functions

- static void SetPreviousState ()
- static void QuitGame ()
- static void LoadGame ()
- static void LoadMainMenu ()
- static void SetState (GameState newState)
- static void StopTimeScale ()
- static void SetNormalTimeScale ()
- static void SetTimeScale (float timeScale)

Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Properties

- static GameSettings Settings [get]
- static float RecentTimeScale [get, private set]
- static GameState CurrentState [get, private set]
- static GameState RecentState [get, private set]
- static bool IsUserChecked [get, private set]

Events

- static Action OnUpdate
- static Action < int > OnNewGameRecord
- static Action< float > OnTimeScaleChanged

Private Member Functions

- IEnumerator Start ()
- IEnumerator OnGameLoop ()
- void OnLevelStateChanged (LevelState levelState)
- void OnSceneLoadingStarted (SceneName sceneName)
- void OnBackButtonClicked ()
- void OnScenePrepared (SceneName sceneName)
- void OnSceneLoadingEnded (SceneName sceneName)

Static Private Member Functions

- static void OnExitingState ()
- static void OnEnteringState ()

Private Attributes

- GameSettings settings
- bool isUserChecked
- float recentTimeScale
- · GameState currentState
- · GameState recentState

5.11.1 Member Function Documentation

5.11.1.1 Awake()

```
override void GameManager.Awake ( ) [protected]
```

5.11.1.2 LoadGame()

```
static void GameManager.LoadGame ( ) [static]
```

5.11.1.3 LoadMainMenu()

```
static void GameManager.LoadMainMenu ( ) [static]
```

5.11.1.4 OnBackButtonClicked()

```
void GameManager.OnBackButtonClicked ( ) [private]
```

5.11.1.5 OnDestroy()

```
override void GameManager.OnDestroy ( ) [protected]
```

5.11.1.6 OnEnteringState()

```
static void GameManager.OnEnteringState ( ) [static], [private]
```

5.11.1.7 OnExitingState()

```
static void GameManager.OnExitingState ( ) [static], [private]
```

5.11.1.8 OnGameLoop()

```
IEnumerator GameManager.OnGameLoop ( ) [private]
```

5.11.1.9 OnLevelStateChanged()

```
\begin{tabular}{ll} \begin{tabular}{ll} void $\tt GameManager.OnLevelStateChanged ( \\ & LevelState $\it levelState$) & [private] \end{tabular}
```

5.11.1.10 OnSceneLoadingEnded()

```
\begin{tabular}{ll} {\tt void GameManager.OnSceneLoadingEnded (} \\ & {\tt SceneName \ sceneName \ )} & [\tt private] \end{tabular}
```

5.11.1.11 OnSceneLoadingStarted()

5.11.1.12 OnScenePrepared()

5.11.1.13 QuitGame()

```
static void GameManager.QuitGame ( ) [static]
```

5.11.1.14 SetNormalTimeScale()

```
\verb|static| void GameManager.SetNormalTimeScale| ( ) [static]
```

5.11.1.15 SetPreviousState()

```
static void GameManager.SetPreviousState ( ) [static]
```

5.11.1.16 SetState()

5.11.1.17 SetTimeScale()

```
static void GameManager.SetTimeScale ( {\tt float}\ timeScale\ )\quad [{\tt static}]
```

5.11.1.18 Start()

```
IEnumerator GameManager.Start ( ) [private]
```

5.11.1.19 StopTimeScale()

```
static void GameManager.StopTimeScale ( ) [static]
```

5.11.2 Member Data Documentation

5.11.2.1 currentState

```
GameState GameManager.currentState [private]
```

5.11.2.2 isUserChecked

```
bool GameManager.isUserChecked [private]
```

5.11.2.3 recentState

```
GameState GameManager.recentState [private]
```

5.11.2.4 recentTimeScale

float GameManager.recentTimeScale [private]

5.11.2.5 settings

GameSettings GameManager.settings [private]

5.11.3 Property Documentation

5.11.3.1 CurrentState

```
GameState GameManager.CurrentState [static], [get], [private set]
```

5.11.3.2 IsUserChecked

```
bool GameManager.IsUserChecked [static], [get], [private set]
```

5.11.3.3 RecentState

```
GameState GameManager.RecentState [static], [get], [private set]
```

5.11.3.4 RecentTimeScale

```
{\tt float \ Game Manager.Recent Time Scale \ [static], \ [get], \ [private \ set]}
```

5.11.3.5 Settings

```
GameSettings GameManager.Settings [static], [get]
```

5.11.4 Event Documentation

5.11.4.1 OnNewGameRecord

Action<int> GameManager.OnNewGameRecord [static]

5.11.4.2 OnTimeScaleChanged

Action<float> GameManager.OnTimeScaleChanged [static]

5.11.4.3 OnUpdate

```
Action GameManager.OnUpdate [static]
```

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

• Assets/Scripts/GameManager.cs

5.12 GameOverWindow Class Reference

Inheritance diagram for GameOverWindow:



Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Private Member Functions

• void OnNewGameRecord (int score)

Private Attributes

- Button restartButton
- Button mainMenuButton
- TextMeshProUGUI recordText

Additional Inherited Members

5.12.1 Member Function Documentation

5.12.1.1 Awake()

```
override void GameOverWindow.Awake ( ) [protected]
```

5.12.1.2 OnDestroy()

```
override void GameOverWindow.OnDestroy ( ) [protected]
```

5.12.1.3 OnNewGameRecord()

```
void GameOverWindow.OnNewGameRecord ( int \ score \ ) \quad [private]
```

5.12.2 Member Data Documentation

5.12.2.1 mainMenuButton

```
Button GameOverWindow.mainMenuButton [private]
```

5.12.2.2 recordText

```
TextMeshProUGUI GameOverWindow.recordText [private]
```

5.12.2.3 restartButton

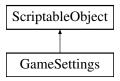
```
Button GameOverWindow.restartButton [private]
```

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

• Assets/Scripts/GameOverWindow.cs

5.13 GameSettings Class Reference

Inheritance diagram for GameSettings:



Properties

- float StartPlayDelay [get]
- int StartBrickCount [get]
- int BrickCountDelta [get]
- float LevelBreakTime [get]
- float StartBrickSpeed [get]
- float StartBrickSpawnInterval [get]
- float MinBrickSpawnInterval [get]
- float BrickSpeedDelta [get]
- float BrickAccelerationTime [get]
- float BrickSpawnIntervalDelta [get]
- float BrickSpaceFactor [get]
- int MinAccountNameLength [get]

Private Attributes

- float startPlayDelay = 0.5f
- int startBrickCount = 1
- int brickCountDelta = 1
- float levelBreakTime = 1.0f
- float startBrickSpeed = 1.0f
- float startBrickSpawnInterval = 2.0f
- float minBrickSpawnInterval = 0.5f
- float brickSpeedDelta = 0.5f
- float brickAccelerationTime = 0.2f
- float brickSpawnIntervalDelta = 0.1f
- float brickSpaceFactor = 0.5f
- int minAccountNameLength = 2

5.13.1 Member Data Documentation

5.13.1.1 brickAccelerationTime

float GameSettings.brickAccelerationTime = 0.2f [private]

5.13.1.2 brickCountDelta

```
int GameSettings.brickCountDelta = 1 [private]
```

5.13.1.3 brickSpaceFactor

```
float GameSettings.brickSpaceFactor = 0.5f [private]
```

5.13.1.4 brickSpawnIntervalDelta

```
float GameSettings.brickSpawnIntervalDelta = 0.1f [private]
```

5.13.1.5 brickSpeedDelta

```
float GameSettings.brickSpeedDelta = 0.5f [private]
```

5.13.1.6 levelBreakTime

```
float GameSettings.levelBreakTime = 1.0f [private]
```

5.13.1.7 minAccountNameLength

```
int GameSettings.minAccountNameLength = 2 [private]
```

5.13.1.8 minBrickSpawnInterval

```
float GameSettings.minBrickSpawnInterval = 0.5f [private]
```

5.13.1.9 startBrickCount

```
int GameSettings.startBrickCount = 1 [private]
```

5.13.1.10 startBrickSpawnInterval

float GameSettings.startBrickSpawnInterval = 2.0f [private]

5.13.1.11 startBrickSpeed

float GameSettings.startBrickSpeed = 1.0f [private]

5.13.1.12 startPlayDelay

float GameSettings.startPlayDelay = 0.5f [private]

5.13.2 Property Documentation

5.13.2.1 BrickAccelerationTime

float GameSettings.BrickAccelerationTime [get]

5.13.2.2 BrickCountDelta

int GameSettings.BrickCountDelta [get]

5.13.2.3 BrickSpaceFactor

float GameSettings.BrickSpaceFactor [get]

5.13.2.4 BrickSpawnIntervalDelta

float GameSettings.BrickSpawnIntervalDelta [get]

5.13.2.5 BrickSpeedDelta

float GameSettings.BrickSpeedDelta [get]

5.13.2.6 LevelBreakTime

float GameSettings.LevelBreakTime [get]

5.13.2.7 MinAccountNameLength

int GameSettings.MinAccountNameLength [get]

5.13.2.8 MinBrickSpawnInterval

float GameSettings.MinBrickSpawnInterval [get]

5.13.2.9 StartBrickCount

int GameSettings.StartBrickCount [get]

5.13.2.10 StartBrickSpawnInterval

float GameSettings.StartBrickSpawnInterval [get]

5.13.2.11 StartBrickSpeed

float GameSettings.StartBrickSpeed [get]

5.13.2.12 StartPlayDelay

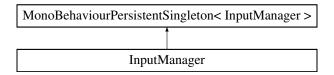
```
float GameSettings.StartPlayDelay [get]
```

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

• Assets/Scripts/GameSettings.cs

5.14 InputManager Class Reference

Inheritance diagram for InputManager:



Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Properties

- static EventSystem EventSystem [get]
- static StandaloneInputModule InputModule [get]

Events

• static Action OnBackButtonClicked

Private Member Functions

• void OnUpdate ()

Private Attributes

- EventSystem eventSystem
- StandaloneInputModule inputModule

5.14.1 Member Function Documentation

5.14.1.1 Awake()

override void InputManager.Awake () [protected]

5.14.1.2 OnDestroy()

override void InputManager.OnDestroy () [protected]

5.14.1.3 OnUpdate()

void InputManager.OnUpdate () [private]

5.14.2 Member Data Documentation

5.14.2.1 eventSystem

EventSystem InputManager.eventSystem [private]

5.14.2.2 inputModule

StandaloneInputModule InputManager.inputModule [private]

5.14.3 Property Documentation

5.14.3.1 EventSystem

EventSystem InputManager.EventSystem [static], [get], [private]

5.14.3.2 InputModule

StandaloneInputModule InputManager.InputModule [static], [get], [private]

5.14.4 Event Documentation

5.14.4.1 OnBackButtonClicked

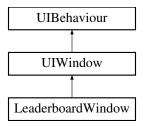
Action InputManager.OnBackButtonClicked [static]

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

• Assets/Scripts/InputManager.cs

5.15 LeaderboardWindow Class Reference

Inheritance diagram for LeaderboardWindow:



Public Member Functions

- override void Open (bool instant=false)
- override void Close (bool instant=false)

Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Private Member Functions

• void UpdateLeaderboard ()

Private Attributes

- string displayFormat = "{0}. {1}: {2}"
- Button backButton
- TextMeshProUGUI playerText
- TextMeshProUGUI userCountText
- TextMeshProUGUI leaderboardText
- readonly StringBuilder stringBuilder = new()
- readonly List< FirebaseUser > users = new()

Additional Inherited Members

5.15.1 Member Function Documentation

5.15.1.1 Awake()

```
override void LeaderboardWindow.Awake ( ) [protected]
```

5.15.1.2 Close()

```
override void LeaderboardWindow.Close (
          bool instant = false ) [virtual]
```

Reimplemented from UlWindow.

5.15.1.3 OnDestroy()

```
override void LeaderboardWindow.OnDestroy ( ) [protected]
```

5.15.1.4 Open()

```
override void LeaderboardWindow.Open (
          bool instant = false ) [virtual]
```

Reimplemented from UlWindow.

5.15.1.5 UpdateLeaderboard()

```
void LeaderboardWindow.UpdateLeaderboard ( ) [private]
```

5.15.2 Member Data Documentation

5.15.2.1 backButton

Button LeaderboardWindow.backButton [private]

5.15.2.2 displayFormat

string LeaderboardWindow.displayFormat = "{0}. {1}: {2}" [private]

5.15.2.3 leaderboardText

TextMeshProUGUI LeaderboardWindow.leaderboardText [private]

5.15.2.4 playerText

TextMeshProUGUI LeaderboardWindow.playerText [private]

5.15.2.5 stringBuilder

readonly StringBuilder LeaderboardWindow.stringBuilder = new() [private]

5.15.2.6 userCountText

TextMeshProUGUI LeaderboardWindow.userCountText [private]

5.15.2.7 users

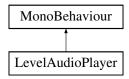
readonly List<FirebaseUser> LeaderboardWindow.users = new() [private]

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

 $\bullet \ Assets/Scripts/LeaderboardWindow.cs\\$

5.16 LevelAudioPlayer Class Reference

Inheritance diagram for LevelAudioPlayer:



Private Member Functions

- void Awake ()
- void OnDestroy ()
- void OnBrickStateChanged (BrickComponent brick)
- void OnLevelStateChanged (LevelState levelState)
- void PlayAudio (AudioClip audioClip, bool randomPitch=false)

Private Attributes

- AudioClip brickClip
- AudioClip stageClip
- AudioClip gameOverClip
- Vector2 pitchRange = new(0.9f, 1.1f)
- AudioSource audioSource

5.16.1 Member Function Documentation

5.16.1.1 Awake()

```
void LevelAudioPlayer.Awake ( ) [private]
```

5.16.1.2 OnBrickStateChanged()

5.16.1.3 OnDestroy()

```
void LevelAudioPlayer.OnDestroy ( ) [private]
```

5.16.1.4 OnLevelStateChanged()

```
\begin{tabular}{ll} {\tt void LevelAudioPlayer.OnLevelStateChanged (} \\ & {\tt LevelState } \ levelState \ ) & [\tt private] \end{tabular}
```

5.16.1.5 PlayAudio()

5.16.2 Member Data Documentation

5.16.2.1 audioSource

AudioSource LevelAudioPlayer.audioSource [private]

5.16.2.2 brickClip

AudioClip LevelAudioPlayer.brickClip [private]

5.16.2.3 gameOverClip

AudioClip LevelAudioPlayer.gameOverClip [private]

5.16.2.4 pitchRange

Vector2 LevelAudioPlayer.pitchRange = new(0.9f, 1.1f) [private]

5.16.2.5 stageClip

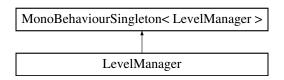
AudioClip LevelAudioPlayer.stageClip [private]

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

Assets/Scripts/LevelAudioPlayer.cs

5.17 LevelManager Class Reference

Inheritance diagram for LevelManager:



Static Public Member Functions

• static void StartLevel ()

Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Properties

- static int Score [get]
- static int CurrentStage [get]
- static float TargetBrickSpeed [get]
- static LevelState State [get]

Events

- static Action< int > OnScoreUpdated
- static Action < LevelState > OnStateChanged

Private Member Functions

- void Start ()
- void OnTimerElapsed ()
- void OnUnspecifiedTimerElapsed ()
- void OnPlayTimerElapsed ()
- void OnNextStageTimerElapsed ()
- void SetState (LevelState newState)
- void OnLevelPlayState ()
- void OnLevelNextStageState ()
- · void OnBrickStateChanged (BrickComponent brick)
- · void OnBrickIdleState (BrickComponent brick)
- void OnBrickDeactivatingState ()
- void OnBrickFallenState ()
- void IncreaseScore ()
- void DecreaseCurrentBrickCount ()
- BrickComponent OnCreatePoolObject ()
- void OnGetPoolObject (BrickComponent brick)
- void OnReleasePoolObject (BrickComponent brick)
- void OnDestroyPoolObject (BrickComponent brick)
- · Vector2 GetBrickStartPoint ()
- void CollectBrickStartPoints ()

Private Attributes

- BrickComponent brickPrefab
- · LevelState state
- int score
- · int currentStage
- · int currentBrickCount
- int remainingBrickCount
- int targetBrickCount
- · int brickColumnCount
- float targetBrickSpeed
- · float brickSpawnInterval
- float brickWorldSpread
- float brickScreenSpread
- Timer timer
- Vector2 brickStartPoint
- Vector2 brickWorldSize
- Vector2 brickScreenSize
- IObjectPool < BrickComponent > brickPool
- readonly List< Vector3 > brickPointsPool = new()
- readonly List< Vector3 > brickStartPoints = new()

Static Private Attributes

• const int StartStage = 1

5.17.1 Member Function Documentation

5.17.1.1 Awake()

```
override void LevelManager.Awake ( ) [protected], [virtual]
```

 $\label{lem:lemented$

5.17.1.2 CollectBrickStartPoints()

```
void LevelManager.CollectBrickStartPoints ( ) [private]
```

5.17.1.3 DecreaseCurrentBrickCount()

```
void LevelManager.DecreaseCurrentBrickCount ( ) [private]
```

5.17.1.4 GetBrickStartPoint()

```
Vector2 LevelManager.GetBrickStartPoint ( ) [private]
```

5.17.1.5 IncreaseScore()

```
void LevelManager.IncreaseScore ( ) [private]
```

5.17.1.6 OnBrickDeactivatingState()

```
void LevelManager.OnBrickDeactivatingState ( ) [private]
```

5.17.1.7 OnBrickFallenState()

```
void LevelManager.OnBrickFallenState ( ) [private]
```

5.17.1.8 OnBrickIdleState()

5.17.1.9 OnBrickStateChanged()

```
\begin{tabular}{ll} \begin{tabular}{ll} void LevelManager.OnBrickStateChanged ( \\ & BrickComponent \begin{tabular}{ll} brick \end{tabular}) & [private] \end{tabular}
```

5.17.1.10 OnCreatePoolObject()

```
BrickComponent LevelManager.OnCreatePoolObject ( ) [private]
```

5.17.1.11 OnDestroy()

```
override void LevelManager.OnDestroy ( ) [protected], [virtual]
```

Reimplemented from MonoBehaviourSingleton < LevelManager >.

5.17.1.12 OnDestroyPoolObject()

5.17.1.13 OnGetPoolObject()

5.17.1.14 OnLevelNextStageState()

```
void LevelManager.OnLevelNextStageState ( ) [private]
```

5.17.1.15 OnLevelPlayState()

```
void LevelManager.OnLevelPlayState ( ) [private]
```

5.17.1.16 OnNextStageTimerElapsed()

```
void LevelManager.OnNextStageTimerElapsed ( ) [private]
```

5.17.1.17 OnPlayTimerElapsed()

```
void LevelManager.OnPlayTimerElapsed ( ) [private]
```

5.17.1.18 OnReleasePoolObject()

5.17.1.19 OnTimerElapsed()

```
void LevelManager.OnTimerElapsed ( ) [private]
```

5.17.1.20 OnUnspecifiedTimerElapsed()

```
void LevelManager.OnUnspecifiedTimerElapsed ( ) [private]
```

5.17.1.21 SetState()

5.17.1.22 Start()

```
void LevelManager.Start ( ) [private]
```

5.17.1.23 StartLevel()

```
static void LevelManager.StartLevel ( ) [static]
```

5.17.2 Member Data Documentation

5.17.2.1 brickColumnCount

```
int LevelManager.brickColumnCount [private]
```

5.17.2.2 brickPointsPool

```
readonly List<Vector3> LevelManager.brickPointsPool = new() [private]
```

5.17.2.3 brickPool

```
IObjectPool<BrickComponent> LevelManager.brickPool [private]
```

5.17.2.4 brickPrefab

BrickComponent LevelManager.brickPrefab [private]

5.17.2.5 brickScreenSize

Vector2 LevelManager.brickScreenSize [private]

5.17.2.6 brickScreenSpread

float LevelManager.brickScreenSpread [private]

5.17.2.7 brickSpawnInterval

float LevelManager.brickSpawnInterval [private]

5.17.2.8 brickStartPoint

Vector2 LevelManager.brickStartPoint [private]

5.17.2.9 brickStartPoints

readonly List<Vector3> LevelManager.brickStartPoints = new() [private]

5.17.2.10 brickWorldSize

Vector2 LevelManager.brickWorldSize [private]

5.17.2.11 brickWorldSpread

float LevelManager.brickWorldSpread [private]

5.17.2.12 currentBrickCount

int LevelManager.currentBrickCount [private]

5.17.2.13 currentStage

int LevelManager.currentStage [private]

5.17.2.14 remainingBrickCount

int LevelManager.remainingBrickCount [private]

5.17.2.15 score

int LevelManager.score [private]

5.17.2.16 StartStage

const int LevelManager.StartStage = 1 [static], [private]

5.17.2.17 state

LevelState LevelManager.state [private]

5.17.2.18 targetBrickCount

```
int LevelManager.targetBrickCount [private]
```

5.17.2.19 targetBrickSpeed

```
float LevelManager.targetBrickSpeed [private]
```

5.17.2.20 timer

```
Timer LevelManager.timer [private]
```

5.17.3 Property Documentation

5.17.3.1 CurrentStage

```
int LevelManager.CurrentStage [static], [get]
```

5.17.3.2 Score

```
int LevelManager.Score [static], [get]
```

5.17.3.3 State

```
LevelState LevelManager.State [static], [get]
```

5.17.3.4 TargetBrickSpeed

```
float LevelManager.TargetBrickSpeed [static], [get]
```

5.17.4 Event Documentation

5.17.4.1 OnScoreUpdated

Action<int> LevelManager.OnScoreUpdated [static]

5.17.4.2 OnStateChanged

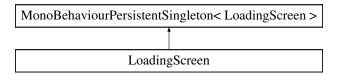
Action<LevelState> LevelManager.OnStateChanged [static]

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

• Assets/Scripts/LevelManager.cs

5.18 LoadingScreen Class Reference

Inheritance diagram for LoadingScreen:



Static Public Member Functions

- static void SetProgressBar (float progress)
- static void SetCanvasActive (bool active)
- static void SetViewGroupActive (bool active)
- static IEnumerator OnFading (float targetAlpha)

Protected Member Functions

• override void Awake ()

Properties

- static Image FadeImage [get]
- static float FadingTime [get]
- static float BreakTime [get]

Private Attributes

- ProgressBar progressBar
- Image fadeImage
- CanvasGroup viewGroup
- float fadingTime = 0.3f
- float breakTime = 0.1f
- Canvas canvas

5.18.1 Member Function Documentation

5.18.1.1 Awake()

```
override void LoadingScreen.Awake ( ) [protected]
```

5.18.1.2 OnFading()

5.18.1.3 SetCanvasActive()

5.18.1.4 SetProgressBar()

5.18.1.5 SetViewGroupActive()

5.18.2 Member Data Documentation

5.18.2.1 breakTime

float LoadingScreen.breakTime = 0.1f [private]

5.18.2.2 canvas

Canvas LoadingScreen.canvas [private]

5.18.2.3 fadelmage

Image LoadingScreen.fadeImage [private]

5.18.2.4 fadingTime

float LoadingScreen.fadingTime = 0.3f [private]

5.18.2.5 progressBar

ProgressBar LoadingScreen.progressBar [private]

5.18.2.6 viewGroup

CanvasGroup LoadingScreen.viewGroup [private]

5.18.3 Property Documentation

5.18.3.1 BreakTime

```
float LoadingScreen.BreakTime [static], [get], [private]
```

5.18.3.2 Fadelmage

```
Image LoadingScreen.FadeImage [static], [get], [private]
```

5.18.3.3 FadingTime

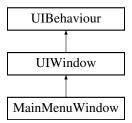
```
float LoadingScreen.FadingTime [static], [get], [private]
```

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

• Assets/Scripts/LoadingScreen.cs

5.19 MainMenuWindow Class Reference

Inheritance diagram for MainMenuWindow:



Protected Member Functions

• override void Awake ()

Private Attributes

- Button startButton
- Button leaderboardButton
- Button quitButton

Additional Inherited Members

5.19.1 Member Function Documentation

5.19.1.1 Awake()

override void MainMenuWindow.Awake () [protected]

5.19.2 Member Data Documentation

5.19.2.1 leaderboardButton

Button MainMenuWindow.leaderboardButton [private]

5.19.2.2 quitButton

Button MainMenuWindow.quitButton [private]

5.19.2.3 startButton

Button MainMenuWindow.startButton [private]

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

• Assets/Scripts/MainMenuWindow.cs

5.20 MathExtensions Class Reference

Static Public Member Functions

- static Vector3 Abs (this Vector3 vector)
- static bool IsEven (this int value)
- static float Abs (this float value)

5.20.1 Member Function Documentation

5.20.1.1 Abs() [1/2]

```
static float MathExtensions.Abs ( \mbox{this float } value \ ) \ \ [\mbox{static}]
```

5.20.1.2 Abs() [2/2]

5.20.1.3 IsEven()

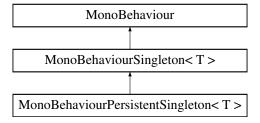
```
static bool MathExtensions.IsEven ( {\tt this\ int}\ value\ )\ \ [{\tt static}]
```

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

• Assets/Scripts/MathExtensions.cs

5.21 MonoBehaviourPersistentSingleton< T> Class Template Reference

Inheritance diagram for MonoBehaviourPersistentSingleton < T >:



Protected Member Functions

• override void Awake ()

Additional Inherited Members

5.21.1 Member Function Documentation

5.21.1.1 Awake()

```
override void MonoBehaviourPersistentSingleton< T >.Awake ( ) [protected], [virtual]
```

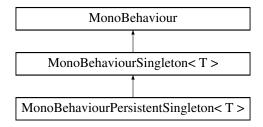
Reimplemented from MonoBehaviourSingleton< T >.

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

• Assets/Scripts/MonoBehaviourPersistentSingleton.cs

5.22 MonoBehaviourSingleton < T > Class Template Reference

Inheritance diagram for MonoBehaviourSingleton< T >:



Protected Member Functions

- virtual void Awake ()
- virtual void OnDestroy ()

Properties

• static T Instance [get, private set]

5.22.1 Member Function Documentation

5.22.1.1 Awake()

```
\mbox{virtual void MonoBehaviourSingleton} < \mbox{T} >. \mbox{Awake ( ) [protected], [virtual]}
```

Reimplemented in LevelManager, and MonoBehaviourPersistentSingleton< T >.

5.22.1.2 OnDestroy()

```
virtual void MonoBehaviourSingleton< T >.OnDestroy ( ) [protected], [virtual]
```

Reimplemented in LevelManager.

5.22.2 Property Documentation

5.22.2.1 Instance

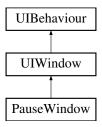
```
T MonoBehaviourSingleton< T >.Instance [static], [get], [private set], [protected]
```

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

• Assets/Scripts/MonoBehaviourSingleton.cs

5.23 PauseWindow Class Reference

Inheritance diagram for PauseWindow:



Protected Member Functions

• override void Awake ()

Private Attributes

- Button resumeButton
- Button exitButton

Additional Inherited Members

5.23.1 Member Function Documentation

5.23.1.1 Awake()

override void PauseWindow.Awake () [protected]

5.23.2 Member Data Documentation

5.23.2.1 exitButton

Button PauseWindow.exitButton [private]

5.23.2.2 resumeButton

Button PauseWindow.resumeButton [private]

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

• Assets/Scripts/PauseWindow.cs

5.24 PlayerHUD Class Reference

Inheritance diagram for PlayerHUD:



Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Private Member Functions

void SetScoreText (int score)

Private Attributes

• TextMeshProUGUI scoreValueText

5.24.1 Member Function Documentation

5.24.1.1 Awake()

```
override void PlayerHUD.Awake ( ) [protected]
```

5.24.1.2 OnDestroy()

```
override void PlayerHUD.OnDestroy ( ) [protected]
```

5.24.1.3 SetScoreText()

```
void PlayerHUD.SetScoreText ( int \ \textit{score} \ ) \ \ [private]
```

5.24.2 Member Data Documentation

5.24.2.1 scoreValueText

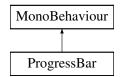
```
TextMeshProUGUI PlayerHUD.scoreValueText [private]
```

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

• Assets/Scripts/PlayerHUD.cs

5.25 ProgressBar Class Reference

Inheritance diagram for ProgressBar:



Public Member Functions

void SetFill (float fillAmount)

Private Attributes

• Image fillImage

5.25.1 Member Function Documentation

5.25.1.1 SetFill()

5.25.2 Member Data Documentation

5.25.2.1 fillImage

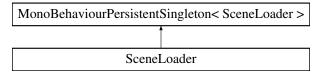
```
Image ProgressBar.fillImage [private]
```

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

• Assets/Scripts/ProgressBar.cs

5.26 SceneLoader Class Reference

Inheritance diagram for SceneLoader:



Static Public Member Functions

- static void ReloadScene ()
- static void LoadScene (SceneName sceneName, bool additive=false)
- static AsyncOperation LoadSceneAsync (SceneName sceneName, bool additive=false)
- static void StartSceneLoading (SceneName sceneName)

Properties

• static SceneName ActiveScene [get]

Events

- static Action < SceneName > OnSceneLoadingStarted
- static Action < SceneName > OnScenePrepared
- static Action < SceneName > OnSceneLoadingEnded

Private Member Functions

- IEnumerator Start ()
- IEnumerator OnLoading ()

Private Attributes

- bool isLoading
- · SceneName sceneToLoad

Additional Inherited Members

5.26.1 Member Function Documentation

5.26.1.1 LoadScene()

5.26.1.2 LoadSceneAsync()

5.26.1.3 OnLoading()

```
IEnumerator SceneLoader.OnLoading ( ) [private]
```

5.26.1.4 ReloadScene()

```
static void SceneLoader.ReloadScene ( ) [static]
```

5.26.1.5 Start()

```
IEnumerator SceneLoader.Start ( ) [private]
```

5.26.1.6 StartSceneLoading()

5.26.2 Member Data Documentation

5.26.2.1 isLoading

```
bool SceneLoader.isLoading [private]
```

5.26.2.2 sceneToLoad

```
SceneName SceneLoader.sceneToLoad [private]
```

5.26.3 Property Documentation

5.26.3.1 ActiveScene

```
SceneName SceneLoader.ActiveScene [static], [get]
```

5.26.4 Event Documentation

5.26.4.1 OnSceneLoadingEnded

Action<SceneName> SceneLoader.OnSceneLoadingEnded [static]

5.26.4.2 OnSceneLoadingStarted

Action<SceneName> SceneLoader.OnSceneLoadingStarted [static]

5.26.4.3 OnScenePrepared

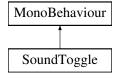
Action<SceneName> SceneLoader.OnScenePrepared [static]

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

• Assets/Scripts/SceneLoader.cs

5.27 SoundToggle Class Reference

Inheritance diagram for SoundToggle:



Private Member Functions

- void Awake ()
- void Start ()
- void OnDestroy ()
- void SetAudioSprite (float volume)
- void OnButtonClicked ()

Private Attributes

- Sprite offSprite
- · Image audioImage
- Button button

5.27.1 Member Function Documentation

5.27.1.1 Awake()

```
void SoundToggle.Awake ( ) [private]
```

5.27.1.2 OnButtonClicked()

```
void SoundToggle.OnButtonClicked ( ) [private]
```

5.27.1.3 OnDestroy()

```
void SoundToggle.OnDestroy ( ) [private]
```

5.27.1.4 SetAudioSprite()

5.27.1.5 Start()

```
void SoundToggle.Start ( ) [private]
```

5.27.2 Member Data Documentation

5.27.2.1 audioImage

```
Image SoundToggle.audioImage [private]
```

5.27.2.2 button

Button SoundToggle.button [private]

5.27.2.3 offSprite

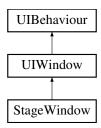
```
Sprite SoundToggle.offSprite [private]
```

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

• Assets/Scripts/SoundToggle.cs

5.28 StageWindow Class Reference

Inheritance diagram for StageWindow:



Public Member Functions

• override void Open (bool instant)

Protected Member Functions

• override void Awake ()

Private Attributes

- float speedMultiplier = 1.0f
- TextMeshProUGUI stageValueText

Additional Inherited Members

5.28.1 Member Function Documentation

5.29 Timer Class Reference 77

5.28.1.1 Awake()

```
override void StageWindow.Awake ( ) [protected]
```

5.28.1.2 Open()

```
override void StageWindow.Open ( bool\ instant\ ) \quad [virtual]
```

Reimplemented from UIWindow.

5.28.2 Member Data Documentation

5.28.2.1 speedMultiplier

```
float StageWindow.speedMultiplier = 1.0f [private]
```

5.28.2.2 stageValueText

```
TextMeshProUGUI StageWindow.stageValueText [private]
```

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

• Assets/Scripts/StageWindow.cs

5.29 Timer Class Reference

Inheritance diagram for Timer:



Public Member Functions

- Timer (float targetTime, Action action)
- void Dispose ()
- void Restart (float targetTime=default, Action action=default)
- void Stop ()
- void Resume ()

Private Member Functions

• void OnUpdate ()

Private Attributes

- bool elapsed
- float targetTime
- float currentTime
- Action action

5.29.1 Constructor & Destructor Documentation

5.29.1.1 Timer()

5.29.2 Member Function Documentation

5.29.2.1 Dispose()

```
void Timer.Dispose ( )
```

5.29.2.2 OnUpdate()

```
void Timer.OnUpdate ( ) [private]
```

5.29.2.3 Restart()

5.29.2.4 Resume()

```
void Timer.Resume ( )
```

5.29.2.5 Stop()

```
void Timer.Stop ( )
```

5.29.3 Member Data Documentation

5.29.3.1 action

```
Action Timer.action [private]
```

5.29.3.2 currentTime

```
float Timer.currentTime [private]
```

5.29.3.3 elapsed

```
bool Timer.elapsed [private]
```

5.29.3.4 targetTime

```
float Timer.targetTime [private]
```

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

• Assets/Scripts/Timer.cs

5.30 UIExtensions Class Reference

Static Public Member Functions

- static void SetAlpha (this Image image, float alpha)
- static void SetActive (this CanvasGroup canvasGroup, bool active)

5.30.1 Member Function Documentation

5.30.1.1 SetActive()

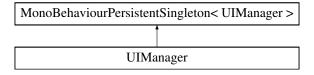
5.30.1.2 SetAlpha()

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

• Assets/Scripts/UIExtensions.cs

5.31 UlManager Class Reference

Inheritance diagram for UIManager:



Static Public Member Functions

- static void OpenWindow
 T > (bool instant=false)
- static void CloseWindow
 T > (bool instant=false)

Protected Member Functions

- override void Awake ()
- override void OnDestroy ()

Properties

static Dictionary < Type, UlWindow > AllWindows [get]

Private Member Functions

- void AddWindow (UIWindow window)
- void RemoveWindow (UIWindow window)
- void OnWindowStateChanged (UIWindow window)

Private Attributes

- readonly Dictionary
 Type, UIWindow > allWindows = new()
- readonly List< UIWindow > windowsBuffer = new()

5.31.1 Member Function Documentation

5.31.1.1 AddWindow()

5.31.1.2 Awake()

```
override void UIManager.Awake ( ) [protected]
```

5.31.1.3 CloseWindow< T >()

```
static void UIManager.CloseWindow<br/>< T > ( bool instant = false ) [static]
```

Type Constraints

T: UlWindow

5.31.1.4 OnDestroy()

```
override void UIManager.OnDestroy ( ) [protected]
```

5.31.1.5 OnWindowStateChanged()

5.31.1.6 OpenWindow< T >()

```
static void UIManager.OpenWindow<br/>< T > ( bool instant = false ) [static]
```

Type Constraints

T: UIWindow

5.31.1.7 RemoveWindow()

5.31.2 Member Data Documentation

5.31.2.1 allWindows

```
readonly Dictionary<Type, UIWindow> UIManager.allWindows = new() [private]
```

5.31.2.2 windowsBuffer

```
readonly List<UIWindow> UIManager.windowsBuffer = new() [private]
```

5.31.3 Property Documentation

5.31.3.1 AllWindows

```
Dictionary<Type, UIWindow> UIManager.AllWindows [static], [get], [private]
```

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

· Assets/Scripts/UIManager.cs

5.32 UIWindow Class Reference

Inheritance diagram for UIWindow:



Public Member Functions

- virtual void Open (bool instant=false)
- virtual void Close (bool instant=false)
- void SetInteractable (bool interactable)

Protected Member Functions

- override void Awake ()
- override void Start ()
- override void OnDestroy ()

Properties

- Animator Animator [get]
- bool IsOpen [get]
- Type Type [get, private set]
- int SortingOrder [get, set]

Events

- static Action < UIWindow > OnStarting
- static Action< UIWindow > OnDestroyed
- static Action< UIWindow > OnStateChanged

Private Types

• enum State

Private Member Functions

• void SetState (State newState)

Private Attributes

- bool on
- Canvas canvas
- Animator animator
- CanvasGroup canvasGroup
- State state = State.Unspecified

5.32.1 Member Enumeration Documentation

5.32.1.1 State

```
enum UIWindow.State [private]
```

5.32.2 Member Function Documentation

5.32.2.1 Awake()

```
override void UIWindow.Awake ( ) [protected]
```

5.32.2.2 Close()

```
virtual void UIWindow.Close (
                bool instant = false ) [virtual]
```

Reimplemented in LeaderboardWindow.

5.32.2.3 OnDestroy()

```
override void UIWindow.OnDestroy ( ) [protected]
```

5.32.2.4 Open()

```
virtual void UIWindow.Open (
               bool instant = false ) [virtual]
```

Reimplemented in StageWindow, and LeaderboardWindow.

5.32.2.5 SetInteractable()

5.32.2.6 SetState()

5.32.2.7 Start()

```
override void UIWindow.Start ( ) [protected]
```

5.32.3 Member Data Documentation

5.32.3.1 animator

```
Animator UIWindow.animator [private]
```

5.32.3.2 canvas

```
Canvas UIWindow.canvas [private]
```

5.32.3.3 canvasGroup

CanvasGroup UIWindow.canvasGroup [private]

5.32.3.4 on

bool UIWindow.on [private]

5.32.3.5 state

State UIWindow.state = State.Unspecified [private]

5.32.4 Property Documentation

5.32.4.1 Animator

Animator UIWindow.Animator [get], [protected]

5.32.4.2 IsOpen

bool UIWindow.IsOpen [get]

5.32.4.3 SortingOrder

int UIWindow.SortingOrder [get], [set]

5.32.4.4 Type

Type UIWindow.Type [get], [private set]

5.32.5 Event Documentation

5.32.5.1 OnDestroyed

Action<UIWindow> UIWindow.OnDestroyed [static]

5.32.5.2 OnStarting

Action<UIWindow> UIWindow.OnStarting [static]

5.32.5.3 OnStateChanged

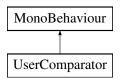
Action<UIWindow> UIWindow.OnStateChanged [static]

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

• Assets/Scripts/UIWindow.cs

5.33 UserComparator Class Reference

Inheritance diagram for UserComparator:



Private Member Functions

- void Start ()
- void Update ()

5.33.1 Member Function Documentation

5.33.1.1 Start()

void UserComparator.Start () [private]

5.33.1.2 Update()

void UserComparator.Update () [private]

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

· Assets/Scripts/UserComparator.cs

Chapter 6

File Documentation

6.1 Assets/Scripts/AccountWindow.cs File Reference

Classes

class AccountWindow

6.2 Assets/Scripts/AudioManager.cs File Reference

Classes

• class AudioManager

6.3 Assets/Scripts/BrickComponent.cs File Reference

Classes

class BrickComponent

Typedefs

• using Random = UnityEngine.Random

6.3.1 Typedef Documentation

6.3.1.1 Random

using Random = UnityEngine.Random

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6.4 Assets/Scripts/BrickState.cs File Reference

Enumerations

```
    enum BrickState {
    Idle = 0 , Falling = 1 , Deactivating = 2 , Hidden = 3 ,
    Fallen = 4 }
```

6.4.1 Enumeration Type Documentation

6.4.1.1 BrickState

enum BrickState

Enumerator

Idle	
Falling	
Deactivating	
Hidden	
Fallen	

6.5 Assets/Scripts/CameraManager.cs File Reference

Classes

· class CameraManager

6.6 Assets/Scripts/CollectionExtensions.cs File Reference

Classes

· class CollectionExtensions

6.7 Assets/Scripts/ConnectingWindow.cs File Reference

Classes

• class ConnectingWindow

6.8 Assets/Scripts/CoroutineUtils.cs File Reference

Classes

class CoroutineUtils

6.9 Assets/Scripts/FirebaseManager.cs File Reference

Classes

• class FirebaseManager

6.10 Assets/Scripts/FirebaseUser.cs File Reference

Classes

· struct FirebaseUser

6.11 Assets/Scripts/GameLauncher.cs File Reference

Classes

class GameLauncher

6.12 Assets/Scripts/GameManager.cs File Reference

Classes

· class GameManager

6.13 Assets/Scripts/GameOverWindow.cs File Reference

Classes

• class GameOverWindow

6.14 Assets/Scripts/GameSettings.cs File Reference

Classes

class GameSettings

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6.15 Assets/Scripts/GameState.cs File Reference

Enumerations

```
    enum GameState {
        Unspecified , Initialization , CreateAccount , MainMenu ,
        PlayStart , Play , Pause , GameOver ,
        Loading , Leaderboard }
```

6.15.1 Enumeration Type Documentation

6.15.1.1 GameState

enum GameState

Enumerator

Unspecified	
Initialization	
CreateAccount	
MainMenu	
PlayStart	
Play	
Pause	
GameOver	
Loading	
Leaderboard	

6.16 Assets/Scripts/InputManager.cs File Reference

Classes

• class InputManager

6.17 Assets/Scripts/LeaderboardWindow.cs File Reference

Classes

· class LeaderboardWindow

6.18 Assets/Scripts/LevelAudioPlayer.cs File Reference

Classes

· class LevelAudioPlayer

6.19 Assets/Scripts/LevelManager.cs File Reference

Classes

· class LevelManager

6.20 Assets/Scripts/LevelState.cs File Reference

Enumerations

• enum LevelState { Unspecified = 0 , Play = 1 , NextStage = 2 , GameOver = 3 }

6.20.1 Enumeration Type Documentation

6.20.1.1 LevelState

enum LevelState

Enumerator

Unspecified	
Play	
NextStage	
GameOver	

6.21 Assets/Scripts/LoadingScreen.cs File Reference

Classes

• class LoadingScreen

94 File Documentation

6.22 Assets/Scripts/MainMenuWindow.cs File Reference

Classes

· class MainMenuWindow

6.23 Assets/Scripts/MathExtensions.cs File Reference

Classes

· class MathExtensions

6.24 Assets/Scripts/MonoBehaviourPersistentSingleton.cs File Reference

Classes

class MonoBehaviourPersistentSingleton< T >

6.25 Assets/Scripts/MonoBehaviourSingleton.cs File Reference

Classes

class MonoBehaviourSingleton< T >

6.26 Assets/Scripts/PauseWindow.cs File Reference

Classes

· class PauseWindow

6.27 Assets/Scripts/PlayerHUD.cs File Reference

Classes

• class PlayerHUD

6.28 Assets/Scripts/ProgressBar.cs File Reference

Classes

class ProgressBar

6.29 Assets/Scripts/SceneLoader.cs File Reference

Classes

· class SceneLoader

6.30 Assets/Scripts/SceneName.cs File Reference

Enumerations

```
    enum SceneName {
    Start = 0 , Game = 1 , MainMenu = 2 , PersistentMenagers = 3 ,
    Loading = 4 }
```

6.30.1 Enumeration Type Documentation

6.30.1.1 SceneName

enum SceneName

Enumerator

Start	
Game	
MainMenu	
PersistentMenagers	
Loading	

6.31 Assets/Scripts/SoundToggle.cs File Reference

Classes

class SoundToggle

6.32 Assets/Scripts/StageWindow.cs File Reference

Classes

class StageWindow

96 File Documentation

6.33 Assets/Scripts/TaskExtensions.cs File Reference

6.34 Assets/Scripts/Timer.cs File Reference

Classes

class Timer

6.35 Assets/Scripts/UIExtensions.cs File Reference

Classes

• class UIExtensions

6.36 Assets/Scripts/UIManager.cs File Reference

Classes

class UIManager

6.37 Assets/Scripts/UIWindow.cs File Reference

Classes

class UIWindow

6.38 Assets/Scripts/UserComparator.cs File Reference

Classes

class UserComparator

6.39 README.md File Reference

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