Team Ball Game Template

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# **Contents**

# **Chapter 1**

# Namespace Index

# 1.1 Packages

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

TeamBallGame					 														?1
TeamBallGame.Gameplay					 														??
TeamBallGame.Mechanics					 														??
TeamBallGame.Model .					 														??
TeamBallGame.UI					 														??
TeamBallGame.Visual .					 														??
TMPro					 														??
TMPro.Examples					 														??

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# **Chapter 2**

# **Hierarchical Index**

# 2.1 Class Hierarchy

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

	??
TeamBallGame.Model.BallGameModel	
	??
TeamBallGame.Simulation.Event	
TeamBallGame.Gameplay.BallContest	
TeamBallGame.Gameplay.BallInterception	
TeamBallGame.Gameplay.BarricadeBallCollision	
TeamBallGame.Gameplay.PassBall	
TeamBallGame.Gameplay.SuspendPlay	
TeamBallGame.Simulation.Event< T >	
TeamBallGame.Simulation.Event< BallBounce >	
TeamBallGame.Gameplay.BallBounce	
TeamBallGame.Simulation.Event< BallIsLaunched >	
TeamBallGame.Gameplay.BallIsLaunched	??
TeamBallGame.Simulation.Event< BallUp >	
TeamBallGame.Gameplay.BallUp	
TeamBallGame.Simulation.Event< DisableUserInput >	
TeamBallGame.Gameplay.DisableUserInput	
TeamBallGame.Simulation.Event< EnableUserInput >	
TeamBallGame.Gameplay.EnableUserInput	
TeamBallGame.Simulation.Event< HeadBallCollision >	??
TeamBallGame.Gameplay.HeadBallCollision	??
TeamBallGame.Simulation.Event< LaunchBall >	??
TeamBallGame.Gameplay.LaunchBall	??
TeamBallGame.Simulation.Event < LookDirectionChanged >	??
TeamBallGame.Gameplay.LookDirectionChanged	??
TeamBallGame.Simulation.Event< PlayerBallCollision >	
TeamBallGame.Gameplay.PlayerBallCollision	
TeamBallGame.Simulation.Event< PlayerHasBeenTackled >	
TeamBallGame.Gameplay.PlayerHasBeenTackled	
	??
• •	

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	??
TeamBallGame.Simulation.Event < PlayerMovement >	??
TeamBallGame.Gameplay.PlayerMovement	??
TeamBallGame.Simulation.Event < PlayerRecoversFromTackle >	
TeamBallGame.Gameplay.PlayerRecoversFromTackle	
TeamBallGame.Simulation.Event< PlayerTackle >	
TeamBallGame.Gameplay.PlayerTackle	
TeamBallGame.Simulation.Event< PrepareToLaunchBall >	
TeamBallGame.Gameplay.PrepareToLaunchBall	
TeamBallGame.Simulation.Event< PrepareToPassBall >	
TeamBallGame.Gameplay.PrepareToPassBall	
$\label{lem:lembal} \textbf{TeamBallGame.Simulation.Event} < \textbf{ReceiveBall} > \dots $	
TeamBallGame.Gameplay.ReceiveBall	??
$\label{thm:cont} Team Ball Game. Simulation. Event < Reposition Arrow Indicator > \dots $	??
TeamBallGame.Gameplay.RepositionArrowIndicator	??
TeamBallGame.Simulation.Event < ResetGamePlay >	
TeamBallGame.Gameplay.ResetGamePlay	
TeamBallGame.Simulation.Event < Score >	
TeamBallGame.Gameplay.Score	
TeamBallGame.Simulation.Event < StartGameplay >	
TeamBallGame.Gameplay.StartGameplay	
TeamBallGame.HeapQueue< T >	
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TeamBallGame Simulation Event / T >	22
TeamBallGame.Simulation.Event< T >	??
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MonoBehaviour TeamBallGame.Barricade	?? ??
MonoBehaviour TeamBallGame.Barricade	?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController	?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio	?? ?? ?? ?? ??
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MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController	?? ?? ?? ?? ?? ??
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MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput	?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball	?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.Motenanics.TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition	?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition TeamBallGame.Model.Goal	?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.Motenanics.TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition	?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition TeamBallGame.Model.FieldPosition TeamBallGame.Model.Player	?? ?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition TeamBallGame.Model.FieldPosition TeamBallGame.Model.Player TeamBallGame.Model.Player TeamBallGame.Model.Team	?? ?? ?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition TeamBallGame.Model.Goal TeamBallGame.Model.Player TeamBallGame.Model.Team TeamBallGame.Ul.MainUlController TMPro.Examples.VertexZoom	?? ?? ?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition TeamBallGame.Model.FieldPosition TeamBallGame.Model.FieldPosition TeamBallGame.Model.Player TeamBallGame.Model.Team TeamBallGame.Ul.MainUlController TMPro.Examples.VertexZoom TeamBallGame.PlayingField TeamBallGame.Oval	?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.GameController TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.UserInput TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition TeamBallGame.Model.FieldPosition TeamBallGame.Model.Flayer TeamBallGame.Model.Team TeamBallGame.Model.Team TeamBallGame.UI.MainUIController TMPro.Examples.VertexZoom TeamBallGame.PlayingField	?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??
MonoBehaviour TeamBallGame.Barricade TeamBallGame.Mechanics.CrowdController TeamBallGame.Mechanics.DirectionIndicator TeamBallGame.Mechanics.GameConfiguration TeamBallGame.Mechanics.ImpactAudio TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.LookIndicator TeamBallGame.Mechanics.MetaGameController TeamBallGame.Mechanics.MovementController TeamBallGame.Mechanics.Scoreboard TeamBallGame.Mechanics.Umpire TeamBallGame.Mechanics.UserInput TeamBallGame.Mechanics.UserInput TeamBallGame.Model.Ball TeamBallGame.Model.FieldPosition TeamBallGame.Model.FieldPosition TeamBallGame.Model.Foam TeamBallGame.Model.Player TeamBallGame.Model.Player TeamBallGame.Model.Player TeamBallGame.Ul.MainUlController TMPro.Examples.VertexZoom TeamBallGame.PlayingField TeamBallGame.Oval TeamBallGame.Oval TeamBallGame.Quadrangle	?? ?? ?? ?? ?? ?? ?? ?? ?? ?? ??

# **Chapter 3**

# **Class Index**

# 3.1 Class List

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

TeamBallGame.Model.Ball	
This behaviour fires ball events and provides a Ball API to the designer.	??
TeamBallGame.Gameplay.BallBounce	
This event occurs whenever the ball bounces on the field	??
TeamBallGame.Gameplay.BallContest	
This event is scheduled when players come into contact with the ball or the player in possession	
of the ball. The actual contest (with all participants) is resolved later.	??
TeamBallGame.Mechanics.BallGameConfig	
This class is designed to be accessed via Simulation.GetModel. It contains scene specific con-	
figuration items which are not directly related to gameplay. Gameplay specific data is stored in	
the BallGameModel class.	??
TeamBallGame.Model.BallGameModel	
This is a general model containing all data required for simulation of a ball game. It needs to	
be initialised at the start of a game by the GameController. It also contains methods for getting	20
useful information from the model	??
TeamBallGame.Gameplay.BallInterception	??
This event is fired when the ball has been successfuly launched by a player.	??
TeamBallGame.Gameplay.BallUp	
This event occurs when the ball is stationary, or thrown in / bounced by an umpire and the two	
nearest players will compete for possession	??
TeamBallGame.Barricade	??
TeamBallGame.Gameplay.BarricadeBallCollision	
This event occurs when the ball hits a barricade. Logic for scheduling out-of-bounds events	
would happen here	??
TeamBallGame.ComponentPool< T >	??
TeamBallGame.Mechanics.CrowdController	??
TeamBallGame.Mechanics.DirectionIndicator	
Sets the location of a transform and looks at another transform. Used for providing visual feed-	
back about directions to the user.	??
TeamBallGame.Gameplay.DisableUserInput	
This event is fired when user input has been disabled for gameplay reasons (eg referee suspends	
play, goal is scored)	??
TeamBallGame.Gameplay.EnableUserInput	
This event is fired when user input has been reenabled for gameplay reasons (eg Ball up contest	
started)	??

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TeamBallGame.Simulation.Event	??
TeamBallGame.Simulation.Event< T >	??
TeamBallGame.Model.FieldPosition	
A named position on a playing field, for example "Goal Keeper".	??
TeamBallGame.Mechanics.GameConfiguration	
This behaviour holds configuration information for gameplay, and stores it in the Simulation Ball←	
GameModel instance when initialised.	??
TeamBallGame.Mechanics.GameController	??
TeamBallGame.Model.Goal	
This behaviour is attached to goal trigger volumes, and will fire a Score event when a Ball com-	-00
ponent enters the trigger	??
TeamBallGame.Gameplay.HeadBallCollision	00
This event is fired when the head collider of a player makes contact with the ball.	??
TeamBallGame.HeapQueue< T >	??
TeamBallGame.Visual.IdleIndexSetter	??
TeamBallGame.Mechanics.ImpactAudio  Plays impact audio, taking into account distance from audio listener and the speed of sound in	
air at 20C	??
TeamBallGame.Gameplay.LaunchBall	• •
This event occurs when a player launches the ball. It is usually followed by a BallIsLaunched	
event.	??
TeamBallGame.Gameplay.LookDirectionChanged	
This event is fired when the user input has changed the look direction of the active player	??
TeamBallGame.Mechanics.LookIndicator	
A specialised Directional Indicator used to indicate the current pass direction, and if the pass	
direction will intercept a team mate.	??
TeamBallGame.UI.MainUIController	??
TeamBallGame.Mechanics.MetaGameController	
The MetaGameController is responsible for switching control between the high level contexts of	
the application, eg the Main Menu and Gameplay systems.	??
TeamBallGame.Mechanics.MovementController	??
TeamBallGame.Oval	??
TeamBallGame.Gameplay.PassBall	??
TeamBallGame.Model.Player	??
TeamBallGame.Gameplay.PlayerBallCollision	
This event is fired when a player collides with the ball. Generally, this would start a BallContest.	??
TeamBallGame.Gameplay.PlayerHasBeenTackled	
This event is fired when a player has been tackled.	??
TeamBallGame.Gameplay.PlayerJump	•
This event is fired when the jump input is activated.	??
TeamBallGame.Gameplay.PlayerMovement	??
TeamBallGame.Gameplay.PlayerRecoversFromTackle	??
TeamBallGame.Gameplay.PlayerTackle	00
This event is triggered when the tackle input is received.	?? ??
TeamBallGame.PlayingField	"
TeamBallGame.Gameplay.PrepareToLaunchBall  This event is fired when a player is launching the ball at a target position	??
TeamBallGame.Gameplay.PrepareToPassBall	• •
This event is fired when a player is passing the ball.	??
TeamBallGame.Quadrangle	??
TeamBallGame.Gameplay.ReceiveBall	
This event is fired when a player receives control of the ball.	??
TeamBallGame.Gameplay.RepositionArrowIndicator	??
TeamBallGame.Gameplay.ResetGamePlay	-
Reset game play to a ball up or kick off state. Eg, move ball to center and all players to field	
positions.	??

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TeamBallGame.Gameplay.ResolveBallContest	
This event is continuously scheduled so that pending ball contests can be resolved and ball	
possession can be changed accordingly	??
TeamBallGame.Gameplay.Score	
This event is fired when the ball enters a Goal trigger.	??
TeamBallGame.Mechanics.Scoreboard	
Scoreboard waits for ScoreEvents and updates text widgets with the new score values	??
TeamBallGame.Gameplay.StartGameplay	
This event is triggered when gameplay should start, eg at the start of a game period or after the	
ball is returned to the center.	??
TeamBallGame.Gameplay.SuspendPlay	
Suspend play occurs when players must stop and allow a penalty, ball up or some other event to	
occur before resuming	??
TeamBallGame.Model.Team	??
TeamBallGame.Mechanics.Umpire	??
TeamBallGame.Mechanics.UserInput	??
TMPro.Examples.VertexZoom	??

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# Chapter 4

# **Namespace Documentation**

# 4.1 TeamBallGame Namespace Reference

# **Namespaces**

#### Classes

- · class Barricade
- · class ComponentPool
- class Fuzzy
- · class HeapQueue
- · class Oval
- · class PlayingField
- · class Quadrangle
- · class Simulation

The Simulation class implements the discrete event simulator pattern. Events are pooled.

# 4.2 TeamBallGame.Gameplay Namespace Reference

# Classes

· class BallBounce

This event occurs whenever the ball bounces on the field.

class BallContest

This event is scheduled when players come into contact with the ball or the player in possession of the ball. The actual contest (with all participants) is resolved later.

- · class BallInterception
- · class BallIsLaunched

This event is fired when the ball has been successfuly launched by a player.

class BallUp

This event occurs when the ball is stationary, or thrown in / bounced by an umpire and the two nearest players will compete for possession.

· class BarricadeBallCollision

This event occurs when the ball hits a barricade. Logic for scheduling out-of-bounds events would happen here.

· class DisableUserInput

This event is fired when user input has been disabled for gameplay reasons (eg referee suspends play, goal is scored)

class EnableUserInput

This event is fired when user input has been reenabled for gameplay reasons (eg Ball up contest started)

class HeadBallCollision

This event is fired when the head collider of a player makes contact with the ball.

class LaunchBall

This event occurs when a player launches the ball. It is usually followed by a BallIsLaunched event.

· class LookDirectionChanged

This event is fired when the user input has changed the look direction of the active player.

- class PassBall
- · class PlayerBallCollision

This event is fired when a player collides with the ball. Generally, this would start a BallContest.

· class PlayerHasBeenTackled

This event is fired when a player has been tackled.

class PlayerJump

This event is fired when the jump input is activated.

- class PlayerMovement
- class PlayerRecoversFromTackle
- class PlayerTackle

This event is triggered when the tackle input is received.

· class PrepareToLaunchBall

This event is fired when a player is launching the ball at a target position.

class PrepareToPassBall

This event is fired when a player is passing the ball.

class ReceiveBall

This event is fired when a player receives control of the ball.

- class RepositionArrowIndicator
- class ResetGamePlay

Reset game play to a ball up or kick off state. Eq, move ball to center and all players to field positions.

class ResolveBallContest

This event is continuously scheduled so that pending ball contests can be resolved and ball possession can be changed accordingly.

class Score

This event is fired when the ball enters a Goal trigger.

· class StartGameplay

This event is triggered when gameplay should start, eg at the start of a game period or after the ball is returned to the center.

class SuspendPlay

Suspend play occurs when players must stop and allow a penalty, ball up or some other event to occur before resuming.

# 4.3 TeamBallGame.Mechanics Namespace Reference

#### **Classes**

· class BallGameConfig

This class is designed to be accessed via Simulation. GetModel. It contains scene specific configuration items which are not directly related to gameplay. Gameplay specific data is stored in the BallGameModel class.

· class CrowdController

· class DirectionIndicator

Sets the location of a transform and looks at another transform. Used for providing visual feedback about directions to the user.

· class GameConfiguration

This behaviour holds configuration information for gameplay, and stores it in the Simulation BallGameModel instance when initialised

- class GameController
- · class ImpactAudio

Plays impact audio, taking into account distance from audio listener and the speed of sound in air at 20C.

· class LookIndicator

A specialised Directional Indicator used to indicate the current pass direction, and if the pass direction will intercept a team mate.

· class MetaGameController

The MetaGameController is responsible for switching control between the high level contexts of the application, eg the Main Menu and Gameplay systems.

- class MovementController
- class Scoreboard

Scoreboard waits for ScoreEvents and updates text widgets with the new score values.

- · class Umpire
- · class UserInput

# 4.4 TeamBallGame.Model Namespace Reference

#### **Classes**

· class Ball

This behaviour fires ball events and provides a Ball API to the designer.

class BallGameModel

This is a general model containing all data required for simulation of a ball game. It needs to be initialised at the start of a game by the GameController. It also contains methods for getting useful information from the model.

class FieldPosition

A named position on a playing field, for example "Goal Keeper".

class Goal

This behaviour is attached to goal trigger volumes, and will fire a Score event when a Ball component enters the trigger.

- · class Player
- · class Team

# **Enumerations**

enum TeamType { Home, Away }

# 4.5 TeamBallGame.UI Namespace Reference

#### Classes

· class MainUIController

# 4.6 TeamBallGame.Visual Namespace Reference

# Classes

class IdleIndexSetter

# 4.7 TMPro Namespace Reference

**Namespaces** 

# 4.8 TMPro.Examples Namespace Reference

# Classes

class VertexZoom

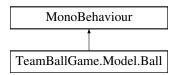
# **Chapter 5**

# **Class Documentation**

# 5.1 TeamBallGame.Model.Ball Class Reference

This behaviour fires ball events and provides a Ball API to the designer.

Inheritance diagram for TeamBallGame.Model.Ball:



# **Public Attributes**

- new Rigidbody rigidbody
- ImpactAudio impactAudio
- bool IsPossessedByHomeTeam => ballGame.playerInPossession == null ? false : ballGame.playerIn←
   Possession.team.teamType == TeamType.Home
- bool IsPossessedByAwayTeam => ballGame.playerInPossession == null ? false : ballGame.playerIn←
   Possession.team.teamType == TeamType.Away
- bool IsPossessed => ballGame.playerInPossession != null
- float **Height** => transform.position.y

# **Properties**

• bool IsInPlay [get, set]

# 5.1.1 Detailed Description

This behaviour fires ball events and provides a Ball API to the designer.

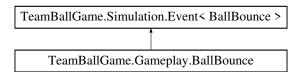
The documentation for this class was generated from the following file:

Assets/TeamBallGameTemplate/Scripts/Model/Ball.cs

# 5.2 TeamBallGame.Gameplay.BallBounce Class Reference

This event occurs whenever the ball bounces on the field.

Inheritance diagram for TeamBallGame.Gameplay.BallBounce:



#### **Public Member Functions**

• override void Execute ()

#### **Public Attributes**

· Collision collision

# 5.2.1 Detailed Description

This event occurs whenever the ball bounces on the field.

**Template Parameters** 

BallBounce

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

· Assets/TeamBallGameTemplate/Scripts/Gameplay/BallBounce.cs

# 5.3 TeamBallGame.Gameplay.BallContest Class Reference

This event is scheduled when players come into contact with the ball or the player in possession of the ball. The actual contest (with all participants) is resolved later.

Inheritance diagram for TeamBallGame.Gameplay.BallContest:



#### **Public Member Functions**

override void Execute ()

#### **Public Attributes**

· Player player

# 5.3.1 Detailed Description

This event is scheduled when players come into contact with the ball or the player in possession of the ball. The actual contest (with all participants) is resolved later.

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/BallContest.cs

# 5.4 TeamBallGame.Mechanics.BallGameConfig Class Reference

This class is designed to be accessed via Simulation.GetModel. It contains scene specific configuration items which are not directly related to gameplay. Gameplay specific data is stored in the BallGameModel class.

#### **Public Attributes**

- Sprite aiControllcon
- Transform reticle
- LookIndicator arrowIndicator
- DirectionIndicator activeGoalDirectionIndicator
- · ParticleSystem ballBounceParticles
- ParticleSystem goalScoreParticles
- GameObject [] enableOnGoal
- AudioClip ballBounceAudio
- AudioClip headBallCollisionAudio
- AudioClip ballKickAudio
- AudioClip tackleAudio
- AudioClip crowdAudio
- AudioClip tackledAudio
- AudioClip interceptionAudio

# 5.4.1 Detailed Description

This class is designed to be accessed via Simulation.GetModel. It contains scene specific configuration items which are not directly related to gameplay. Gameplay specific data is stored in the BallGameModel class.

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

Assets/TeamBallGameTemplate/Scripts/Mechanics/BallGameConfig.cs

# 5.5 TeamBallGame.Model.BallGameModel Class Reference

This is a general model containing all data required for simulation of a ball game. It needs to be initialised at the start of a game by the GameController. It also contains methods for getting useful information from the model.

#### **Public Member Functions**

• bool IsClosest (Player player)

Query if the player is one of the closest two players to the ball.

void AddToContest (Player player)

Add a player to the active contest, which will be resolved later by an external system.

• Player GetClosestPlayer (Player[] players, Vector3 position)

#### **Public Attributes**

Ball ball

The ball.

- Team homeTeam
- Player homePlayerPrefab
- float maxSpeed = 5
- float backwardsSpeedPenalty = 0.7f
- float maxKickDistance = 30
- float maxTurnSpeed = 360
- Player playerInPossession

The player currently in possession of the ball.

Player [] players

The list of all players from both teams.

List< Player > activeContest = new List<Player>()

The list of players involved in an active contest.

bool IsBallUnderUserControl => playerInPossession?.team.teamType == TeamType.Home

Is the ball currently possessed by a player from the home team?

- int homeScore = 0
- int awayScore = 0
- · Goal homeGoal

Goal components for each team.

- float durationFromGoalToBallup = 4
- float timeBetweenTackles = 2
- float tackleRecoveryTime = 1.3f

# 5.5.1 Detailed Description

This is a general model containing all data required for simulation of a ball game. It needs to be initialised at the start of a game by the GameController. It also contains methods for getting useful information from the model.

#### 5.5.2 Member Function Documentation

#### 5.5.2.1 AddToContest()

Add a player to the active contest, which will be resolved later by an external system.

#### **Parameters**

# 5.5.2.2 IsClosest()

```
bool TeamBallGame.Model.BallGameModel.IsClosest ( {\tt Player~player~)}
```

Query if the player is one of the closest two players to the ball.

#### **Parameters**

player	
--------	--

Returns

# 5.5.3 Member Data Documentation

# 5.5.3.1 activeContest

```
List<Player> TeamBallGame.Model.BallGameModel.activeContest = new List<Player>()
```

The list of players involved in an active contest.

### 5.5.3.2 ball

```
Ball TeamBallGame.Model.BallGameModel.ball
```

The ball.

#### 5.5.3.3 homeGoal

```
{\tt Goal} \  \, {\tt TeamBallGame.Model.BallGameModel.homeGoal}
```

Goal components for each team.

#### 5.5.3.4 IsBallUnderUserControl

```
bool TeamBallGame.Model.BallGameModel.IsBallUnderUserControl => playerInPossession?.team. ← teamType == TeamType.Home
```

Is the ball currently possessed by a player from the home team?

#### 5.5.3.5 playerInPossession

```
Player TeamBallGame.Model.BallGameModel.playerInPossession
```

The player currently in possession of the ball.

#### 5.5.3.6 players

```
Player [] TeamBallGame.Model.BallGameModel.players
```

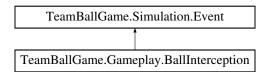
The list of all players from both teams.

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

• Assets/TeamBallGameTemplate/Scripts/Model/BallGameModel.cs

# 5.6 TeamBallGame.Gameplay.BallInterception Class Reference

Inheritance diagram for TeamBallGame.Gameplay.BallInterception:



**Public Member Functions** 

• override void Execute ()

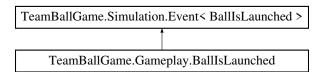
The documentation for this class was generated from the following file:

Assets/TeamBallGameTemplate/Scripts/Gameplay/BallInterception.cs

# 5.7 TeamBallGame.Gameplay.BallIsLaunched Class Reference

This event is fired when the ball has been successfuly launched by a player.

Inheritance diagram for TeamBallGame.Gameplay.BallIsLaunched:



#### **Public Member Functions**

• override void Execute ()

#### **Public Attributes**

- float flightDuration
- · Player playerThatLaunchedBall
- · Vector3 targetPosition
- · Vector3 velocity

# 5.7.1 Detailed Description

This event is fired when the ball has been successfuly launched by a player.

# Template Parameters BallIsLaunched

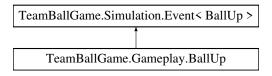
The documentation for this class was generated from the following file:

· Assets/TeamBallGameTemplate/Scripts/Gameplay/BallIsLaunched.cs

# 5.8 TeamBallGame.Gameplay.BallUp Class Reference

This event occurs when the ball is stationary, or thrown in / bounced by an umpire and the two nearest players will compete for possession.

Inheritance diagram for TeamBallGame.Gameplay.BallUp:



# **Public Member Functions**

override void Execute ()

#### **Public Attributes**

· Vector3 position

# 5.8.1 Detailed Description

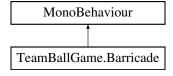
This event occurs when the ball is stationary, or thrown in / bounced by an umpire and the two nearest players will compete for possession.

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/BallUp.cs

# 5.9 TeamBallGame.Barricade Class Reference

Inheritance diagram for TeamBallGame.Barricade:



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

· Assets/TeamBallGameTemplate/Scripts/Model/Barricade.cs

# 5.10 TeamBallGame.Gameplay.BarricadeBallCollision Class Reference

This event occurs when the ball hits a barricade. Logic for scheduling out-of-bounds events would happen here.

Inheritance diagram for TeamBallGame.Gameplay.BarricadeBallCollision:



#### **Public Member Functions**

override void Execute ()

# **Public Attributes**

- · Collision collision
- · Barricade barricade

#### 5.10.1 Detailed Description

This event occurs when the ball hits a barricade. Logic for scheduling out-of-bounds events would happen here.

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

 $\bullet \ Assets/TeamBallGameTemplate/Scripts/Gameplay/BarricadeBallCollision.cs$ 

# 5.11 TeamBallGame.ComponentPool < T > Class Template Reference

**Static Public Member Functions** 

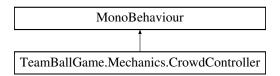
- · static void Prewarm (T prefab, int count)
- static T Take (T prefab)
- static void **Return** (T instance, float when)
- static void Return (T instance)

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

• Assets/TeamBallGameTemplate/Scripts/Simulation/ComponentPool.cs

# 5.12 TeamBallGame.Mechanics.CrowdController Class Reference

 $Inheritance\ diagram\ for\ Team Ball Game. Mechanics. Crowd Controller:$ 



# **Public Attributes**

- · AnimationCurve intensity
- · Transform homeGoal

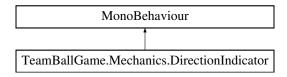
The documentation for this class was generated from the following file:

Assets/TeamBallGameTemplate/Scripts/Mechanics/CrowdController.cs

# 5.13 TeamBallGame.Mechanics.DirectionIndicator Class Reference

Sets the location of a transform and looks at another transform. Used for providing visual feedback about directions to the user.

Inheritance diagram for TeamBallGame.Mechanics.DirectionIndicator:



#### **Public Attributes**

- Transform source
- Vector3 offset

# 5.13.1 Detailed Description

Sets the location of a transform and looks at another transform. Used for providing visual feedback about directions to the user.

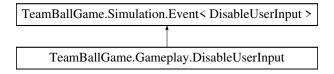
The documentation for this class was generated from the following file:

 $\bullet \ \ Assets/TeamBallGame Template/Scripts/Mechanics/DirectionIndicator.cs$ 

# 5.14 TeamBallGame.Gameplay.DisableUserInput Class Reference

This event is fired when user input has been disabled for gameplay reasons (eg referee suspends play, goal is scored)

Inheritance diagram for TeamBallGame.Gameplay.DisableUserInput:



# **Public Member Functions**

• override void Execute ()

# 5.14.1 Detailed Description

This event is fired when user input has been disabled for gameplay reasons (eg referee suspends play, goal is scored)

# Template Parameters DisableUserInput

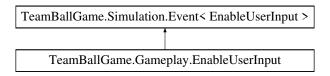
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Gameplay/DisableUserInput.cs

# 5.15 TeamBallGame.Gameplay.EnableUserInput Class Reference

This event is fired when user input has been reenabled for gameplay reasons (eg Ball up contest started)

Inheritance diagram for TeamBallGame.Gameplay.EnableUserInput:



#### **Public Member Functions**

• override void Execute ()

# 5.15.1 Detailed Description

This event is fired when user input has been reenabled for gameplay reasons (eg Ball up contest started)

# Template Parameters DisableUserInput

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/EnableUserInput.cs

# 5.16 TeamBallGame.Simulation.Event Class Reference

Inheritance diagram for TeamBallGame.Simulation.Event:



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

• Assets/TeamBallGameTemplate/Scripts/Simulation/Simulation.Event.cs

# 5.17 TeamBallGame.Simulation.Event Class Reference

Inheritance diagram for TeamBallGame.Simulation.Event:



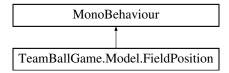
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Simulation/Simulation.Event.cs

# 5.18 TeamBallGame.Model.FieldPosition Class Reference

A named position on a playing field, for example "Goal Keeper".

Inheritance diagram for TeamBallGame.Model.FieldPosition:



# **Public Attributes**

• float radius = 2

# 5.18.1 Detailed Description

A named position on a playing field, for example "Goal Keeper".

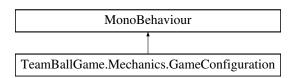
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Model/FieldPosition.cs

# 5.19 TeamBallGame.Mechanics.GameConfiguration Class Reference

This behaviour holds configuration information for gameplay, and stores it in the Simulation BallGameModel instance when initialised.

Inheritance diagram for TeamBallGame.Mechanics.GameConfiguration:



# **Public Attributes**

- BallGameModel model
- · BallGameConfig config

# 5.19.1 Detailed Description

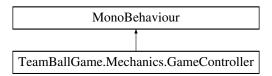
This behaviour holds configuration information for gameplay, and stores it in the Simulation BallGameModel instance when initialised.

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

• Assets/TeamBallGameTemplate/Scripts/Mechanics/GameConfiguration.cs

# 5.20 TeamBallGame.Mechanics.GameController Class Reference

Inheritance diagram for TeamBallGame.Mechanics.GameController:



# **Public Attributes**

UserInput homeUserInput

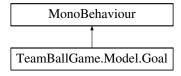
The documentation for this class was generated from the following file:

 $\bullet \ Assets/TeamBallGameTemplate/Scripts/Mechanics/GameController.cs$ 

# 5.21 TeamBallGame.Model.Goal Class Reference

This behaviour is attached to goal trigger volumes, and will fire a Score event when a Ball component enters the trigger.

Inheritance diagram for TeamBallGame.Model.Goal:



# **Public Attributes**

- TeamType teamType
- int scoreValue = 1

### 5.21.1 Detailed Description

This behaviour is attached to goal trigger volumes, and will fire a Score event when a Ball component enters the trigger.

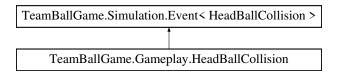
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Model/Goal.cs

# 5.22 TeamBallGame.Gameplay.HeadBallCollision Class Reference

This event is fired when the head collider of a player makes contact with the ball.

Inheritance diagram for TeamBallGame.Gameplay.HeadBallCollision:



# **Public Member Functions**

• override void Execute ()

#### **Public Attributes**

- Player player
- Vector3 deltaToBall

# 5.22.1 Detailed Description

This event is fired when the head collider of a player makes contact with the ball.

# Template Parameters HeadBallCollision

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

Assets/TeamBallGameTemplate/Scripts/Gameplay/HeadBallCollision.cs

# 5.23 TeamBallGame.HeapQueue < T > Class Template Reference

#### **Public Member Functions**

- void Clear ()
- bool Contains (Titem)
- void Remove (T item)
- T Peek ()
- · void Push (T item)
- T Pop ()

#### **Properties**

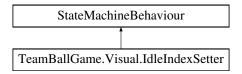
- int Count [get]
- bool IsEmpty [get]
- T First [get]

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

• Assets/TeamBallGameTemplate/Scripts/Simulation/HeapQueue.cs

# 5.24 TeamBallGame.Visual.IdleIndexSetter Class Reference

Inheritance diagram for TeamBallGame.Visual.IdleIndexSetter:



# **Public Member Functions**

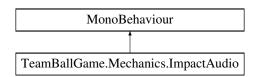
• override void OnStateEnter (Animator animator, AnimatorStateInfo, int layerIndex)

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

• Assets/TeamBallGameTemplate/Scripts/Visual/IdleIndexSetter.cs

# 5.25 TeamBallGame.Mechanics.ImpactAudio Class Reference

Plays impact audio, taking into account distance from audio listener and the speed of sound in air at 20C. Inheritance diagram for TeamBallGame.Mechanics.ImpactAudio:



#### **Public Member Functions**

- · void Play (float magnitude, AudioClip clip)
- void Play (Collision collision, AudioClip clip)

# **Public Attributes**

- float estimatedMaxImpactVelocity = 16
- · new AudioSource audio

# 5.25.1 Detailed Description

Plays impact audio, taking into account distance from audio listener and the speed of sound in air at 20C.

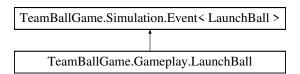
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Mechanics/ImpactAudio.cs

# 5.26 TeamBallGame.Gameplay.LaunchBall Class Reference

This event occurs when a player launches the ball. It is usually followed by a BallIsLaunched event.

Inheritance diagram for TeamBallGame.Gameplay.LaunchBall:



#### **Public Member Functions**

- override void Execute ()
- void CalculateVelocity (Vector3 target, out Vector3 velocity, out float duration)

### **Public Attributes**

- · Vector3 target
- · Player player

#### 5.26.1 Detailed Description

This event occurs when a player launches the ball. It is usually followed by a BallIsLaunched event.

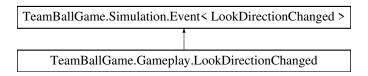
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Gameplay/LaunchBall.cs

# 5.27 TeamBallGame.Gameplay.LookDirectionChanged Class Reference

This event is fired when the user input has changed the look direction of the active player.

 $Inheritance\ diagram\ for\ Team Ball Game. Game play. Look Direction Changed:$ 



#### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

- Player player
- Vector3 direction

# 5.27.1 Detailed Description

This event is fired when the user input has changed the look direction of the active player.

# **Template Parameters**

LookDirectionChanged

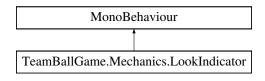
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Gameplay/LookDirectionChanged.cs

# 5.28 TeamBallGame.Mechanics.LookIndicator Class Reference

A specialised Directional Indicator used to indicate the current pass direction, and if the pass direction will intercept a team mate.

 $Inheritance\ diagram\ for\ Team Ball Game. Mechanics. Look Indicator:$ 



# **Public Member Functions**

- void SetPassIndicator (bool passable)
- void **SetPositions** (Vector3 start, Vector3 end)

# **Public Attributes**

- · LineRenderer lineRenderer
- · Material normalMaterial
- · Material canPassMaterial

# 5.28.1 Detailed Description

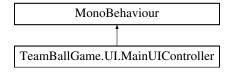
A specialised Directional Indicator used to indicate the current pass direction, and if the pass direction will intercept a team mate.

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

• Assets/TeamBallGameTemplate/Scripts/Mechanics/LookIndicator.cs

# 5.29 TeamBallGame.UI.MainUlController Class Reference

Inheritance diagram for TeamBallGame.UI.MainUIController:



### **Public Member Functions**

· void SetActivePanel (int index)

#### **Public Attributes**

GameObject [] panels

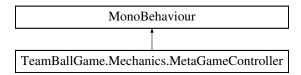
The documentation for this class was generated from the following file:

Assets/TeamBallGameTemplate/UI/MainUIController.cs

# 5.30 TeamBallGame.Mechanics.MetaGameController Class Reference

The MetaGameController is responsible for switching control between the high level contexts of the application, eg the Main Menu and Gameplay systems.

Inheritance diagram for TeamBallGame.Mechanics.MetaGameController:



#### **Public Member Functions**

• void ToggleMainMenu (bool show)

#### **Public Attributes**

- MainUIController mainMenu
- · Canvas [] gamePlayCanvasii
- GameController gameController

#### 5.30.1 Detailed Description

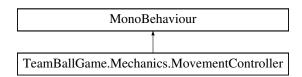
The MetaGameController is responsible for switching control between the high level contexts of the application, eg the Main Menu and Gameplay systems.

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

Assets/TeamBallGameTemplate/Scripts/Mechanics/MetaGameController.cs

# 5.31 TeamBallGame.Mechanics.MovementController Class Reference

 $Inheritance\ diagram\ for\ Team Ball Game. Mechanics. Movement Controller:$ 



# **Public Member Functions**

- void SetMovement (bool enabled)
- void To (Vector3 position)

Set the destinate position for the controller.

• void LookAt (Vector3 position)

Set the desired look at position for the controller.

void LookDirection (Vector3 direction)

Set the desired look direction for the controller.

void BumpTowards (Vector3 position, float duration=1)

Momentarily push the controller in a direction for a specified period. Overrides any destination during this time.

#### **Public Attributes**

- float maxSpeed = 5
- float maxTurnSpeed = 360
- float backwardsSpeedPenalty = 0.4f

#### 5.31.1 Member Function Documentation

### 5.31.1.1 BumpTowards()

Momentarily push the controller in a direction for a specified period. Overrides any destination during this time.

### **Parameters**

position	Ī
duration	

# 5.31.1.2 LookAt()

```
void TeamBallGame.Mechanics.MovementController.LookAt ( {\tt Vector 3}\ position\ )
```

Set the desired look at position for the controller.

#### **Parameters**

position

### 5.31.1.3 LookDirection()

```
\begin{tabular}{ll} {\tt Void TeamBallGame.Mechanics.MovementController.LookDirection (} \\ {\tt Vector3} \ direction \end{tabular})
```

Set the desired look direction for the controller.

#### **Parameters**

```
position
```

### 5.31.1.4 To()

```
void TeamBallGame.Mechanics.MovementController.To ( {\tt Vector3~position~)}
```

Set the destinate position for the controller.

### **Parameters**

```
position
```

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

• Assets/TeamBallGameTemplate/Scripts/Mechanics/MovementController.cs

# 5.32 TeamBallGame.Oval Class Reference

Inheritance diagram for TeamBallGame.Oval:



### **Public Member Functions**

override bool Contains (Vector3 position)

## **Public Attributes**

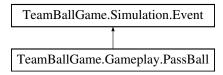
Vector3 size

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

· Assets/TeamBallGameTemplate/Scripts/Model/Oval.cs

# 5.33 TeamBallGame.Gameplay.PassBall Class Reference

Inheritance diagram for TeamBallGame.Gameplay.PassBall:



### **Public Member Functions**

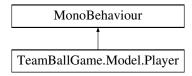
• override void Execute ()

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/PassBall.cs

# 5.34 TeamBallGame.Model.Player Class Reference

Inheritance diagram for TeamBallGame.Model.Player:



## **Public Types**

enum State {
 UserControl, ReturnToPosition, AlControl, Waiting,
 Tackled }

### **Public Member Functions**

- · void OnTackle ()
- void OnPlayerJump ()
- void OnPrepareToLaunchBall (Vector3 target)
- void OnSuccessfulInterception ()
- void OnBallWillLandNearMe (Vector3 targetPosition)
- void OnLaunchBall (Vector3 targetPosition)
- void OnOtherPlayerLaunchedBall (Player playerThatLaunchedBall, Vector3 targetPosition)
- void OnBallBounceNearMe (Vector3 position)
- void OnUserInput (Vector3 moveDirection, Vector3 lookDirection)
- void SetMovement (bool enabled)

### **Public Attributes**

- Vector3 **DeltaToBall** => ballGame.ball.transform.position transform.position
- Vector3 BallPosition => transform.TransformPoint(possessionOffset)
- Vector3 **ReticlePosition** => transform.TransformPoint(reticleOffset)
- Vector3 HeadPosition => transform.TransformPoint(headOffset)
- bool IsBallOwner => ballGame.playerInPossession == this
- bool **IsHomeTeam** => team.teamType == TeamType.Home
- bool IsAI => state == State.AIControl
- Animator animator
- SpriteRenderer icon
- Vector3 possessionOffset = new Vector3(0, -1, -1)
- Vector3 reticleOffset = new Vector3(0, -1, 0)
- Vector3 headOffset = new Vector3(0, 1, 0)
- float headSize = 1

# **Properties**

Vector3 DeltaToGoal [get]

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

- Assets/TeamBallGameTemplate/Scripts/Model/Player.Al.cs
- Assets/TeamBallGameTemplate/Scripts/Model/Player.API.cs
- Assets/TeamBallGameTemplate/Scripts/Model/Player.cs

# 5.35 TeamBallGame.Gameplay.PlayerBallCollision Class Reference

This event is fired when a player collides with the ball. Generally, this would start a BallContest.

Inheritance diagram for TeamBallGame.Gameplay.PlayerBallCollision:



### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

- Player player
- · Collision collision

### 5.35.1 Detailed Description

This event is fired when a player collides with the ball. Generally, this would start a BallContest.

## **Template Parameters**

PlayerBallCollision

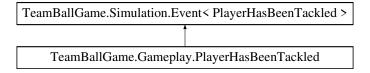
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Gameplay/PlayerBallCollision.cs

# 5.36 TeamBallGame.Gameplay.PlayerHasBeenTackled Class Reference

This event is fired when a player has been tackled.

Inheritance diagram for TeamBallGame.Gameplay.PlayerHasBeenTackled:



### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

- Player player
- Player tackler
- Vector3 direction
- float tacklePower = 5

## 5.36.1 Detailed Description

This event is fired when a player has been tackled.

### **Template Parameters**

PlayerHasBeenTackled

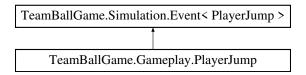
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Gameplay/PlayerHasBeenTackled.cs

# 5.37 TeamBallGame.Gameplay.PlayerJump Class Reference

This event is fired when the jump input is activated.

Inheritance diagram for TeamBallGame.Gameplay.PlayerJump:



### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

Player player

## 5.37.1 Detailed Description

This event is fired when the jump input is activated.

#### **Template Parameters**

PlayerJump

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

 $\bullet \ Assets/TeamBallGameTemplate/Scripts/Gameplay/PlayerJump.cs$ 

# 5.38 TeamBallGame.Gameplay.PlayerMovement Class Reference

 $Inheritance\ diagram\ for\ Team Ball Game. Game play. Player Movement:$ 



### **Public Member Functions**

• override void Execute ()

# **Public Attributes**

· Player player

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/PlayerMovement.cs

# 5.39 TeamBallGame.Gameplay.PlayerRecoversFromTackle Class Reference

 $Inheritance\ diagram\ for\ TeamBallGame. Gameplay. Player Recovers From Tackle:$ 



## **Public Member Functions**

• override void Execute ()

### **Public Attributes**

Player player

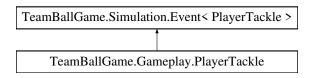
The documentation for this class was generated from the following file:

 $\bullet \ Assets/TeamBallGameTemplate/Scripts/Gameplay/PlayerRecoversFromTackle.cs$ 

# 5.40 TeamBallGame.Gameplay.PlayerTackle Class Reference

This event is triggered when the tackle input is received.

Inheritance diagram for TeamBallGame.Gameplay.PlayerTackle:



#### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

Player player

### 5.40.1 Detailed Description

This event is triggered when the tackle input is received.

### **Template Parameters**

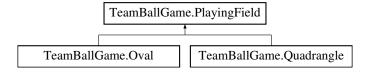
PlayerTackle |

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/PlayerTackle.cs

# 5.41 TeamBallGame.PlayingField Class Reference

Inheritance diagram for TeamBallGame.PlayingField:



### **Public Member Functions**

• abstract bool Contains (Vector3 position)

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

Assets/TeamBallGameTemplate/Scripts/Model/PlayingField.cs

# 5.42 TeamBallGame.Gameplay.PrepareToLaunchBall Class Reference

This event is fired when a player is launching the ball at a target position.

Inheritance diagram for TeamBallGame.Gameplay.PrepareToLaunchBall:



#### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

- Vector3 target
- float **delay** = 0.25f
- Player player

### 5.42.1 Detailed Description

This event is fired when a player is launching the ball at a target position.

### **Template Parameters**

PrepareToLaunchBall |

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

 $\bullet \ Assets/TeamBallGameTemplate/Scripts/Gameplay/PrepareToLaunchBall.cs$ 

# 5.43 TeamBallGame.Gameplay.PrepareToPassBall Class Reference

This event is fired when a player is passing the ball.

Inheritance diagram for TeamBallGame.Gameplay.PrepareToPassBall:



### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

- Vector3 target
- float **delay** = 0.125f
- Player player

## 5.43.1 Detailed Description

This event is fired when a player is passing the ball.

**Template Parameters** 

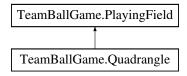
PrepareToPassBall

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/PrepareToPassBall.cs

# 5.44 TeamBallGame.Quadrangle Class Reference

Inheritance diagram for TeamBallGame.Quadrangle:



### **Public Member Functions**

· override bool Contains (Vector3 position)

### **Public Attributes**

• Vector3 size

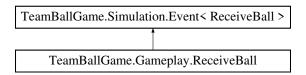
The documentation for this class was generated from the following file:

Assets/TeamBallGameTemplate/Scripts/Model/Quadrangle.cs

# 5.45 TeamBallGame.Gameplay.ReceiveBall Class Reference

This event is fired when a player receives control of the ball.

Inheritance diagram for TeamBallGame.Gameplay.ReceiveBall:



#### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

Player player

### 5.45.1 Detailed Description

This event is fired when a player receives control of the ball.

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

 $\bullet \ Assets/TeamBallGameTemplate/Scripts/Gameplay/ReceiveBall.cs$ 

# 5.46 TeamBallGame.Gameplay.RepositionArrowIndicator Class Reference

Inheritance diagram for TeamBallGame.Gameplay.RepositionArrowIndicator:



## **Public Member Functions**

override void Execute ()

### **Public Attributes**

- · Vector3 position
- · Vector3 direction

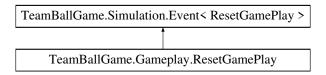
The documentation for this class was generated from the following file:

Assets/TeamBallGameTemplate/Scripts/Gameplay/RepositionArrowIndicator.cs

# 5.47 TeamBallGame.Gameplay.ResetGamePlay Class Reference

Reset game play to a ball up or kick off state. Eg, move ball to center and all players to field positions.

Inheritance diagram for TeamBallGame.Gameplay.ResetGamePlay:



### **Public Member Functions**

• override void Execute ()

### 5.47.1 Detailed Description

Reset game play to a ball up or kick off state. Eq. move ball to center and all players to field positions.

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/ResetGamePlay.cs

# 5.48 TeamBallGame.Gameplay.ResolveBallContest Class Reference

This event is continuously scheduled so that pending ball contests can be resolved and ball possession can be changed accordingly.

 $Inheritance\ diagram\ for\ Team Ball Game. Game play. Resolve Ball Contest:$ 



### **Public Member Functions**

• override void Execute ()

## 5.48.1 Detailed Description

This event is continuously scheduled so that pending ball contests can be resolved and ball possession can be changed accordingly.

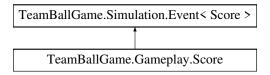
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Gameplay/ResolveBallContest.cs

# 5.49 TeamBallGame.Gameplay.Score Class Reference

This event is fired when the ball enters a Goal trigger.

Inheritance diagram for TeamBallGame.Gameplay.Score:



### **Public Member Functions**

• override void Execute ()

### **Public Attributes**

- TeamType teamType
- Goal goal

# 5.49.1 Detailed Description

This event is fired when the ball enters a Goal trigger.

## **Template Parameters**



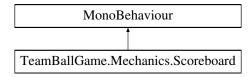
The documentation for this class was generated from the following file:

Assets/TeamBallGameTemplate/Scripts/Gameplay/Score.cs

### 5.50 TeamBallGame.Mechanics.Scoreboard Class Reference

Scoreboard waits for ScoreEvents and updates text widgets with the new score values.

Inheritance diagram for TeamBallGame.Mechanics.Scoreboard:



## **Public Attributes**

• TMPro.TMP\_Text home

### 5.50.1 Detailed Description

Scoreboard waits for ScoreEvents and updates text widgets with the new score values.

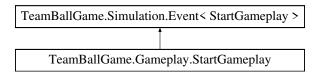
The documentation for this class was generated from the following file:

• Assets/TeamBallGameTemplate/Scripts/Mechanics/Scoreboard.cs

# 5.51 TeamBallGame.Gameplay.StartGameplay Class Reference

This event is triggered when gameplay should start, eg at the start of a game period or after the ball is returned to the center.

Inheritance diagram for TeamBallGame.Gameplay.StartGameplay:



#### **Public Member Functions**

• override void Execute ()

### 5.51.1 Detailed Description

This event is triggered when gameplay should start, eg at the start of a game period or after the ball is returned to the center.

### **Template Parameters**

StartGameplay

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

· Assets/TeamBallGameTemplate/Scripts/Gameplay/StartGameplay.cs

# 5.52 TeamBallGame.Gameplay.SuspendPlay Class Reference

Suspend play occurs when players must stop and allow a penalty, ball up or some other event to occur before resuming.

Inheritance diagram for TeamBallGame.Gameplay.SuspendPlay:



### **Public Member Functions**

• override void Execute ()

### 5.52.1 Detailed Description

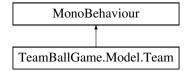
Suspend play occurs when players must stop and allow a penalty, ball up or some other event to occur before resuming.

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

• Assets/TeamBallGameTemplate/Scripts/Gameplay/SuspendPlay.cs

## 5.53 TeamBallGame.Model.Team Class Reference

Inheritance diagram for TeamBallGame.Model.Team:



### **Public Member Functions**

• void InstantiatePlayers ()

### **Public Attributes**

- TeamType teamType
- LayerMask layer
- Goal goal
- Team opposingTeam
- FieldPosition [] positions
- Player [] players
- · Material teamMaterial

### **Properties**

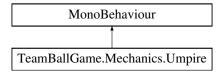
• UserInput UserInput [get, set]

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

• Assets/TeamBallGameTemplate/Scripts/Model/Team.cs

# 5.54 TeamBallGame.Mechanics.Umpire Class Reference

Inheritance diagram for TeamBallGame.Mechanics.Umpire:



## **Properties**

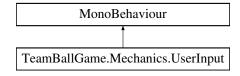
MovementController Move [get]

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

 $\bullet \ \ Assets/TeamBallGameTemplate/Scripts/Mechanics/Umpire.cs$ 

# 5.55 TeamBallGame.Mechanics.UserInput Class Reference

Inheritance diagram for TeamBallGame.Mechanics.UserInput:



## **Public Member Functions**

• void UpdateActivePlayer ()

### **Public Attributes**

· Camera mainCamera

## **Properties**

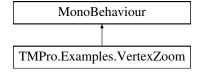
• Player ActivePlayer [get, set]

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

• Assets/TeamBallGameTemplate/Scripts/Mechanics/UserInput.cs

# 5.56 TMPro.Examples.VertexZoom Class Reference

Inheritance diagram for TMPro.Examples.VertexZoom:



## **Public Attributes**

- float scaleMin = 0.5f
- float scaleMax = 1.0f
- float scaleSpeed = 0.1f

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

• Assets/TeamBallGameTemplate/Scripts/Visual/VertexZoom.cs