

# Golf starter kit

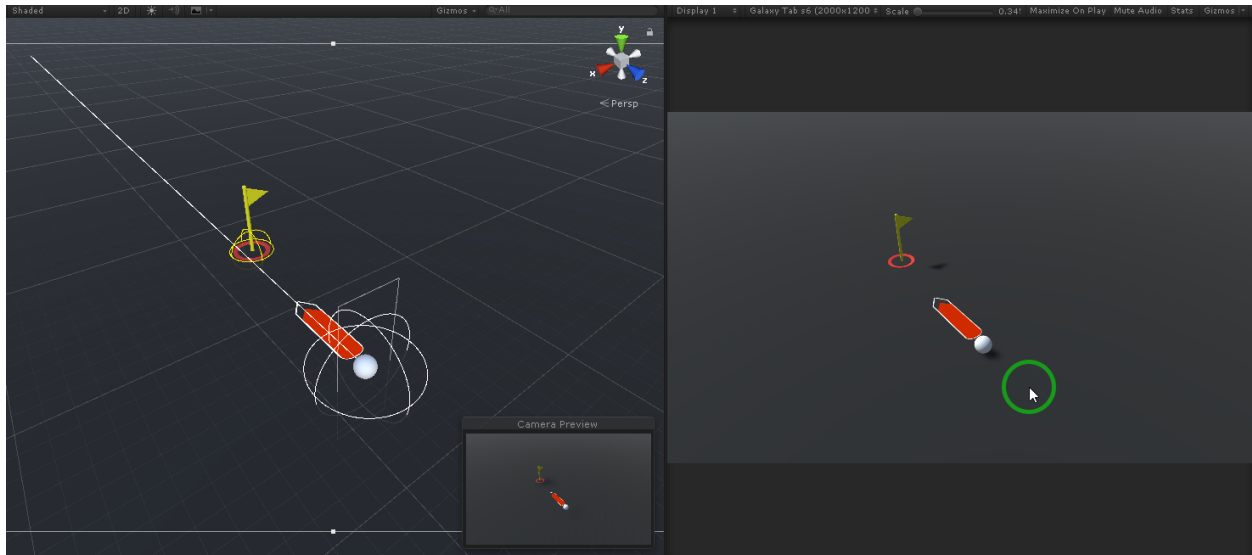
This system will allow you to create simple, cartoony golf system. It includes additional physic functions to enhance ball controlling and hole manager. Hole in this system is either simple or complex with gravity and vertex force.

There you have all scripts to work:

- GolfGameManager
- GolfGameManagerEditor
- GolfBall
- GolfBallEditor
- GolfHole
- GolfHoleEditor
- -
- MainMenu
- MainMenuItem
- GolfMenu
- -
- EditorTools
- Extensions
- Globals

# How it works?

Ball force, UI, directions, physics, hole system will calculate by system. The potential force will change by moving touch position. After release, the potential force converted to dynamic force and the logics will calculate.

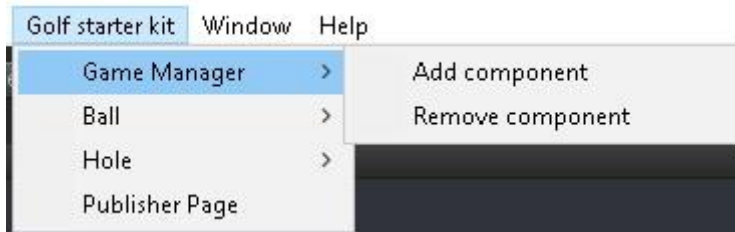


# How to use menu item?

Here the menu items explained quickly but in Scripts title its explained with more details.

## Game Manager

**Game Manager** is the core for handling game logic.

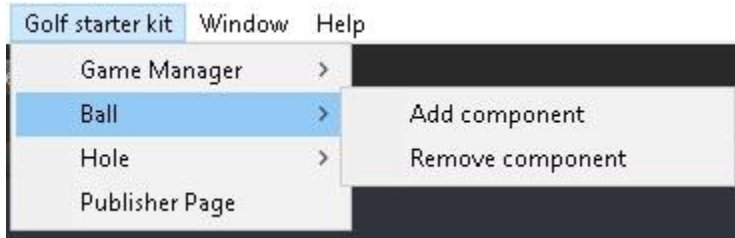


In “Add component” item you can select or add game manager script if not exists.

In “Remove component” item you can remove game manager script component from all game object(s) that you selected.

## Ball

**Ball** is the core for golf ball.

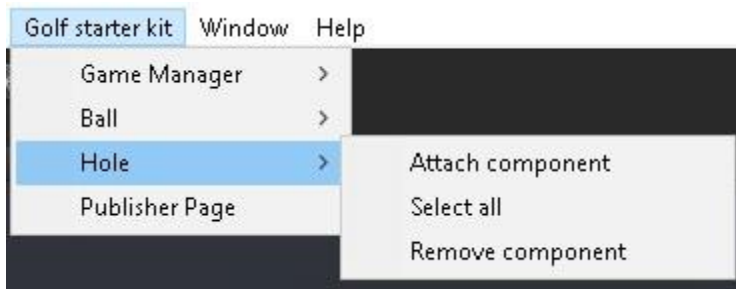


In “Add component” item you can select or add ball script if not exists.

In “Remove component” item you can remove ball script component from all game object(s) that you selected.

# Hole

**Hole** is the core for golf hole.



In “Attach component” item you can attach golf hole script to selected object(s).

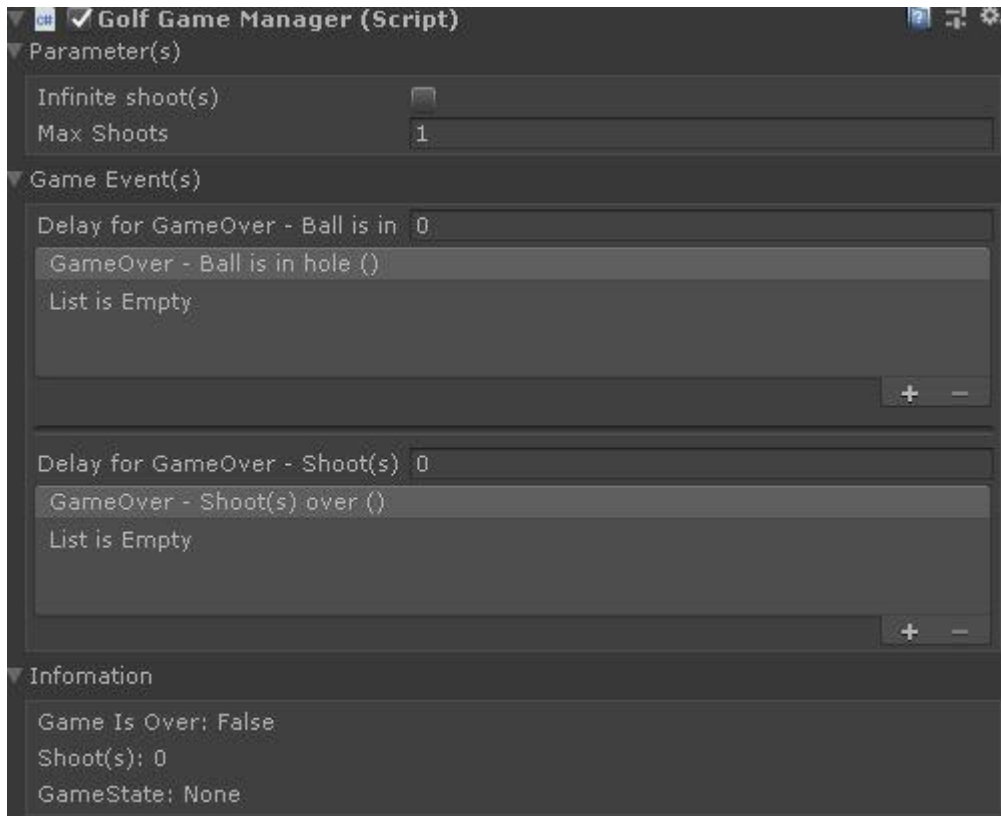
In “Select all” item you can select all object(s) that included golf ball script.

In “Remove component” item you can remove ball script component from all game object(s) that you selected.

# Basic scripts and their parameters

## GolfGameManager

It's the main script to create your game logic. The game manager script will get you complete information for handling game logic.



Parameter(s)	
Infinities shoot(s)	Allow player to have infinities shoots
Max shoots	If player don't be allowed to have infinities shoots you can defend maximum player shoots count
Game Event(s)	
Delay for Ball is in hole	Delay for invoke in second
Ball is in hole	Game over event when ball is in hole
Delay for Shoot(s) over	Delay for invoke in second
Shoot(s) over	Game over event when player shoots are over
Information	
Game is over	Boolean value to explain game is over or not
Shoot(s)	Player shoots count
Game state	Golf game state

Note: the game is over when:

1. The golf ball is in the golf hole and the golf ball velocity is zero
2. The player shoots are over and the golf ball is not in the golf hole

Golf **Game states** are:

- Null: not a valid game state
- None: there is no special state founded yet
- Game over by shoots: The game is over because player shoots are over
- Ball is in hole: The golf ball is in hole correctly

This script has some useful functions that help game designer to develop:

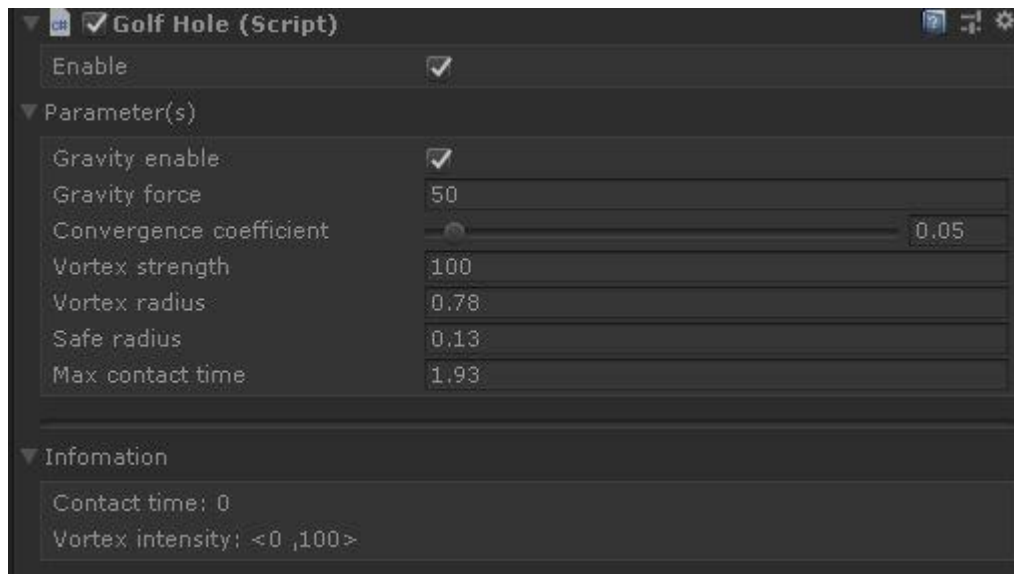
Parameters	
GameIsOver	Read-only Boolean value for game is over or not
GameState	Read-only game state
playerShoots	Read-only player current shoots count
Functions	
GameManagerReset()	Reset the game manager

## GolfGameManagerEditor

Editor for GolfGameManager script class.

## GolfHole

It's the main script to create golf hole.

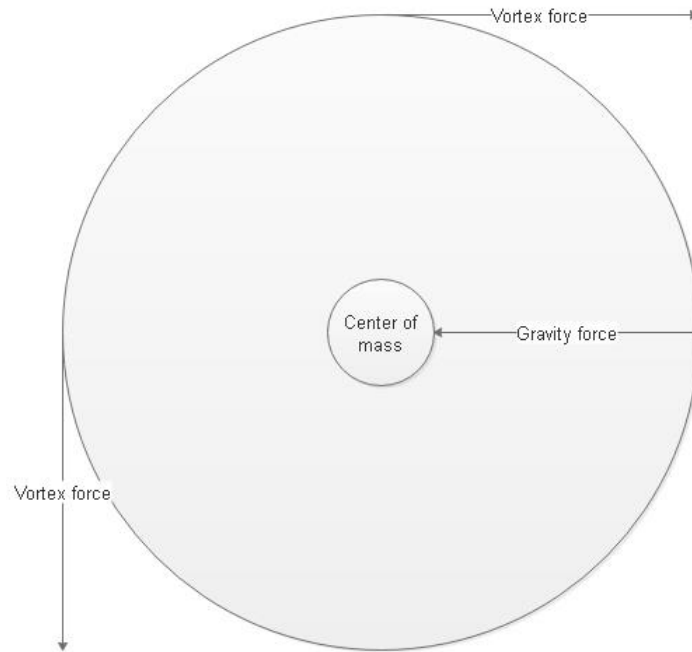


Enable	Make total function calculation enable or disable
<b>Parameter(s)</b>	
Gravity enable	Enable or disable gravity force calculation
Gravity force	Gravity force power
Convergence coefficient	convergence coefficient is cause to ball get in center of hole quickly
Vortex strength	Vortex force power
Vortex radius	Vortex radius region
Safe radius	The radius region of hole that mean ball is in hole correctly
Max contact time	The maximum time that if ball is in safe radius means the ball is in hole
<b>Information</b>	
Contact time	The time that ball is in safe radius
Vortex intensity	Vortex intensity

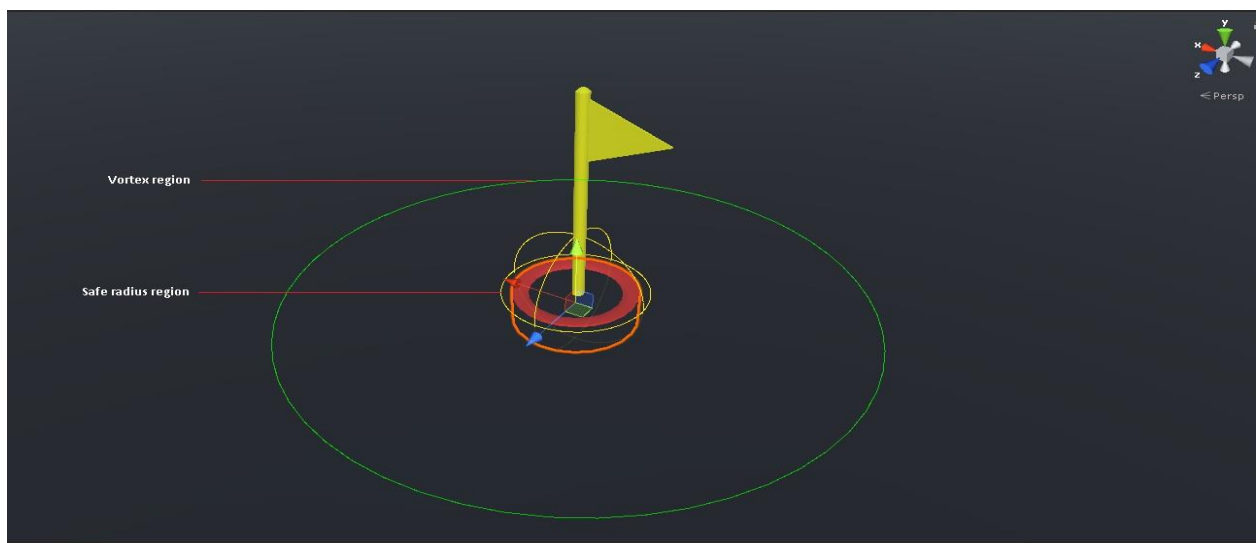
We have two type of force in this function:

1. Gravity
2. Vortex

You can see force vector and directions:



You can see golf hole in configuration mode in this picture:



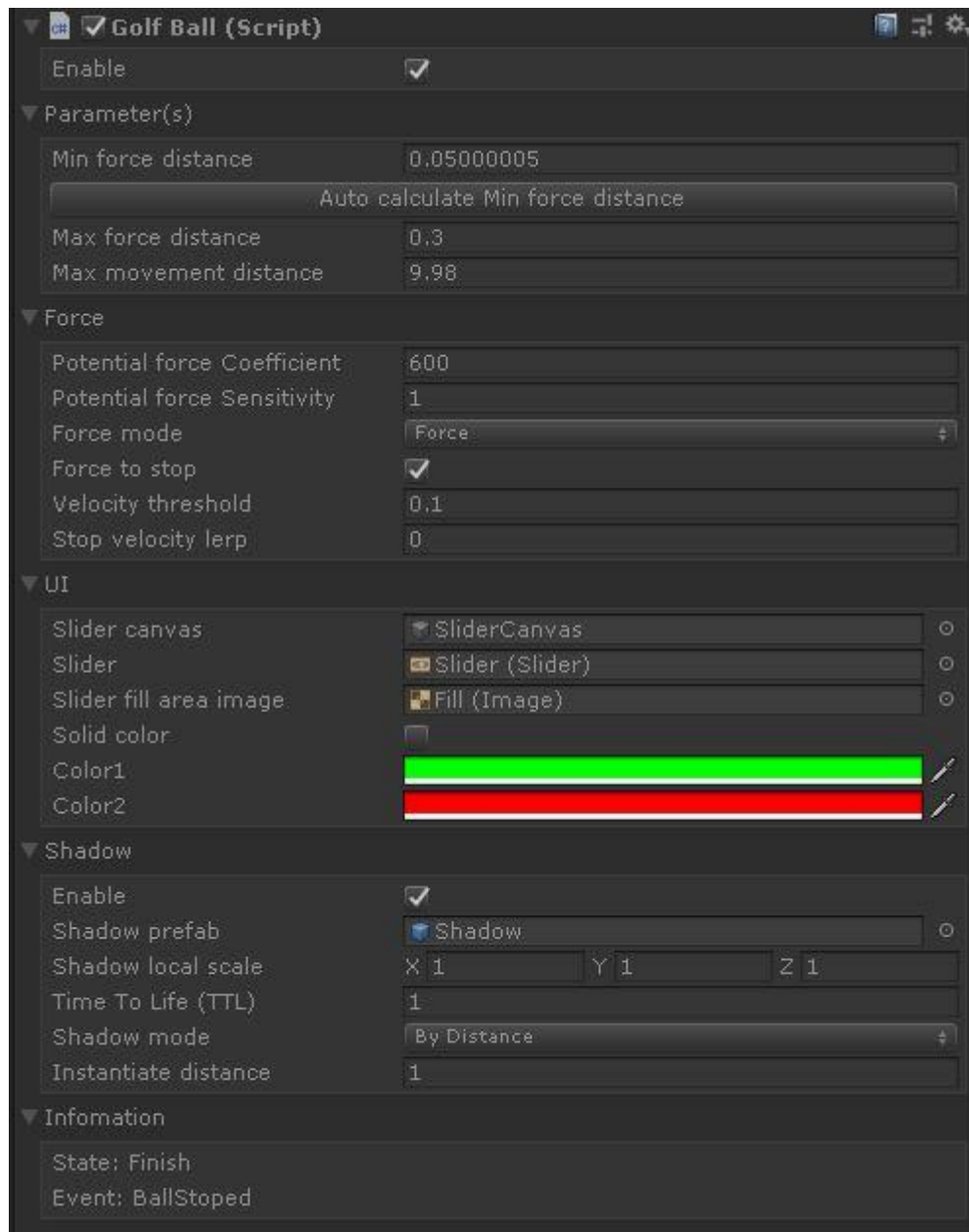
## GolfHoleEditor

Editor for GolfHole class.



## GolfBall

It's the main script to create your game logic. The game manager script will get you complete information for handling game logic.



Enable	Enable or disable
<b>Parameter(s)</b>	
Min force distance	The distance of region between ball center of mass and hit able position to calculate potential force
Max force distance	The distance to end of hit able position to calculate potential force
Max movement distance	Maximum distance that ball can be move
<b>Force</b>	
Potential force coefficient	The value that be multiplied by potential force value
Potential force sensitivity	The value that cause force to potential force to more recently be over flow
Force mode	Unity force mode
Force to stop	The Boolean value to cause ball more rapidly stopped
Velocity threshold	The value that if ball velocity is less than this value, cause to stop ball
Stop velocity lerp	The lerp to stop ball velocity
<b>UI</b>	
Slider canvas	The canvas game object that is slider`s parent
Slider	Slider
Slider fill area image	The image that show potential power
Solid color	Boolean value to show potential power color
Color1	Main potential power color
Color2	High value color to show potential power
<b>Shadow</b>	
Enable	Enable shadow
Shadow prefab	Shadow prefab or game object
Shadow local scale	Shadow local scale
Time to life (TTL)	Shadow time to life in float
Shadow mode	
-By Distance	New shadow will be instanced by delta position
Instance distance	The shadow will be instanced by delta position more than this value
-By Time	New shadow will be instanced by delta time
Instance time	The shadow will be instanced by delta time more than this value
<b>Information</b>	
State	Ball state
Event	Ball event

Golf **Ball states** are:

- Null: not a valid state
- Idle: ball is waiting for player action
- Touched: ball is touched by player
- Release: ball is released
- Finish: ball state is finish and waiting for game manager orders

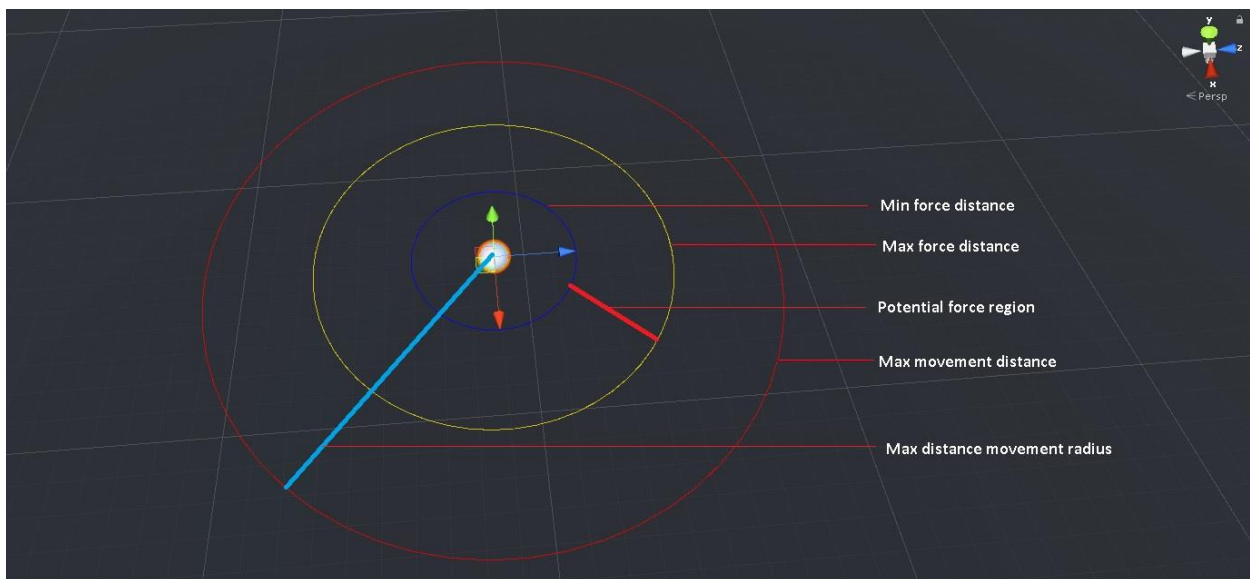
Golf **Ball Events** are:

- Null: not a valid event
- None: no special event founded
- Far distance: ball is moved for the distance more than max distance value
- Ball stopped: ball is stopped after releasing
- Ball is in hole: ball is released and fall in golf hole

This script has some useful functions that help game designer to develop:

Parameters	
CurrentBallState	Read-only current ball state
CurrentBallEvent	Read-only current ball event
PotentialEnergy	Read-only ball potential energy
PotentialForceDirection	Read-only ball potential energy direction
Functions	
ResetBall()	Reset the ball
AddForce(Vector3 force)	Add force to ball

You can see golf ball in configuration mode in this picture:



## **GolfBallEditor**

Editor for GolfBall script class.

## **MainMenu**

Basic class for main menu.

## **MainMenuItem**

Include main menu item(s).

## **GolfMenu**

Main class for main menu.

## **EditorTools**

Main class for create editor.

## **Extensions**

Helper class with useful function(s).

## **Globals**

This is static class for some references.