BALL LINE

USER GUIDE

We strive to provide the best service as we can, if you have any questions or suggestions, please contact us!

Thank you!

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1 INTRODUCTION



Aim and shoot the ball accurately to a moving line, match 3 balls of same color to destroy them before the whole line gets attracted into the deadly blackhole. **BALL LINE** is a simple yet addictive game that will keep the player entertained for hours.

This game is ready for release out-of-the-box. Everything just works. It is also flexible and customizable. Some highlights:

- Addictive one-touch gameplay
- 10 built-in sets of balls, backgrounds and levels.
- Easy to create new levels.
- Free-to-use assets (fonts, sounds, music, model, etc.)
- Optimized for mobile

Most importantly, when equipped with the **Easy Mobile** plugin, this template can form a truly full-featured game that is ready for release. Easy Mobile is a comprehensive, cross-platform package that provides most of desired features of mobile games:

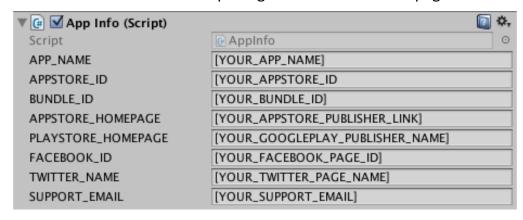
- Support for AdColony, AdMob, Chartboost, Facebook Audience Network, Heyzap, ironSource, MoPub, TapJoy and UnityAds
- In-app purchasing (buying coins and remove ads)
- Support for Game Center (iOS) and Google Play Games Services (Android) for leaderboards and achievements
- Recording gameplay and exporting GIF images
- Sharing to social networks (PNG or GIF images)

- Push notification using OneSignal service
- Native rating request popup (rate my app)

2 GETTING STARTED

2.1 Enter app information

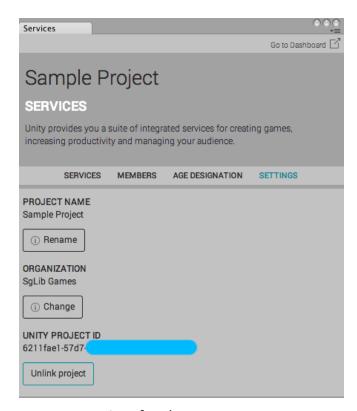
The project contains a game object called AppInfo where you can fill in important app-related metadata like AppStore Id and Bundle Id. These values will be used for features like Rate Us button and opening Facebook or Twitter page.



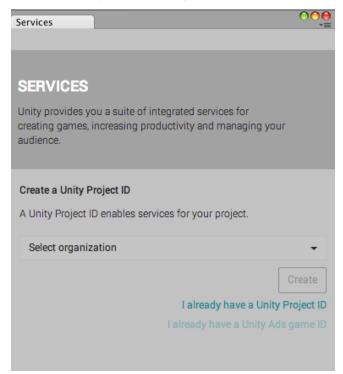
2.2 Link the game to your Unity project

When developing this template, we normally need to link it to our own Unity project for testing, therefore you may need to unlink it from our project and link it to your own one, if you're going to use Unity services (e.g. if you want to enable premium features of this template, you'll need to use Unity IAP service). To unlink the project:

- Select Window -> Unity Services
- Select SETTINGS tab
- Click Unlink Project button



Now you can create a new project for the game.



Now you game is linked to your own Unity project and is ready to use Unity

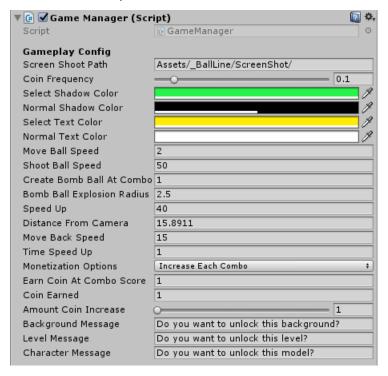
services.

3 TEMPLATE CUSTOMIZATION

3.1 Gameplay tweaking

3.1.1 GameManager

Most of important gameplay parameters can be configured within the GameManager component which is attached to a game object also named GameManager in the hierarchy.



You can tweak the gameplay by modifying following variables:

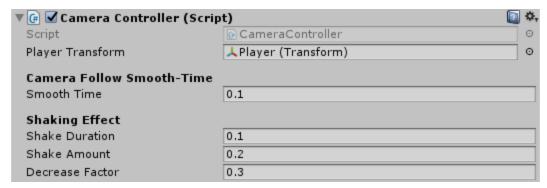
- Screen Shoot Path: the path save level screenshots.
- Select Shadow Color: outline color of selected color.
- Normal Shadow Color: outline color of non-selected color.
- Select Text Color: color of selected tab title.
- Normal Text Color: color of unselected tab title.
- Move Ball Speed: this is the speed for the ball to moving in the path.
- Shoot Ball Speed: this is the speed for the ball which has just been created

to move from shoot position to your touch direction.

- *Create Bomb Ball At Combo Score*: the number of continuous combo score counts that will create a bomb ball.
- Bomb Ball Explosion Radius: the radius when the bomb ball explosion then the balls in that radius will be destroy.
- Speed Up: this is the speed at the beginning or the end for the ball to come out or come in the quickly way.
- *Distance From Camera*: the distance between the camera and the level that will be instantiated later.
- *Move Back Speed*: this is the speed for the ball in front to moving back to the ball behind if there are the same color.
- Time Speed Up: the time for the ball come out quickly at the beginning.
- Monetization Options: there are three modes to earn coin in this game such as OnceCombo in this mode player will earn only once when get combo score the number of times you specify and then player not get coin if they continue get combo score, only earn coin again if the combo score is stop and then get combo score again ,EachComBo in this mode players will earn coin starting with the number of combo that you specified until the combo stops with constant coin, IncreaseEachCombo in this mode after the number of combo that you specified player will earn coin then if they continue get combo score the coin player earned will be increased.
- Earn Coin At Combo: the number of combo that players start earning coin.
- Coin Earned: the number of coin that player can be earned when start earning coin.
- Amount of Coin Increase: only use when you select *IncreaseEachCombo* mode in *Monetization Options* this is give the multiplier the amount that will be increased after each combo from the combo start earning coin.
- Background Message: the message will show in pop up when you want to unlock new background.
- Level Message: the message will show in pop up when you want to unlock new level.
- Character Message: the message will show in pop up when you want to unlock new character.

3.1.2 CameraController

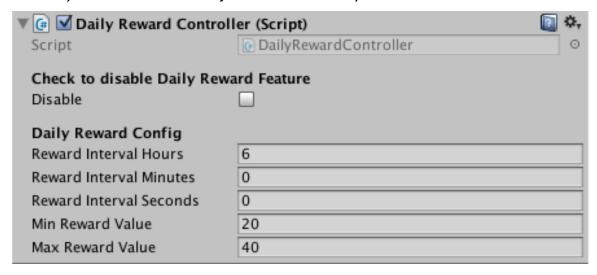
The CameraController component is attached to the Main Camera object in the hierarchy.



- SmoothTime: the smooth time of camera.
- ShakeDuration: how long the camera shaking.
- ShakeAmount: amplitude of the shake, a larger value shakes the camera harder.
- DecreaseFactor: the decrease value of shaking.

3.2 Daily reward feature

This template has a built-in daily reward system in which the user will be rewarded with coins every predefined interval of time. This is an effective way to increase user engagement and retention for your game. You can configure this feature from the *DailyRewardController* object in the hierarchy.



- Disable: check to disable this feature
- Reward Interval Hours, Minutes and Seconds: the amount of time until the

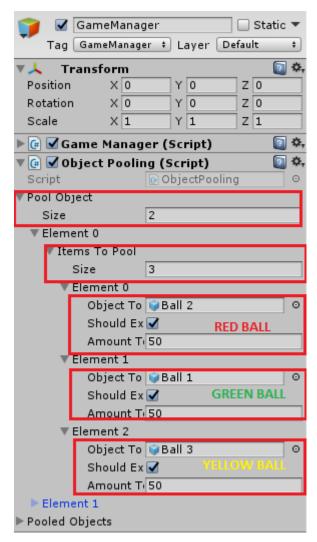
next reward

 Min Reward Value & Max Reward Value: the actual rewarded coins will be randomized between these two values

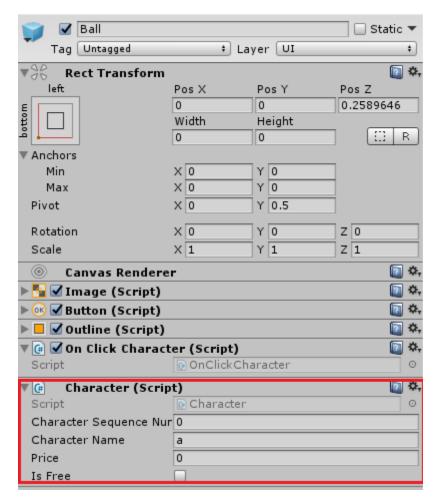
3.3 Adding more characters

Out-of-the-box, this game is already packed with a few characters, cute and ready to use! If you want to add more, follow these simple steps:

- a. Create a character model with the pivot at the center.
- b. Navigate to Assets/Prefabs/Game/Ball and duplicate one of the available character folder you will see three models and a material folder in the character folder.
- c. Change the name of the three prefabs in the *Ball* folder you just duplicate to a preferred one, click in one of the three balls.
- d. Replace the *Sprite* in the *Sprite Renderer* component with your new model Sprite.
- e. Replace the *Material* in the *Sprite Renderer* component with your new character material.
- f. Repeat step d and e for the balls left.
- g. Resize the Pool object array in *GameManager* game object and set size of Item to pool array to 3 then drag the new character to it in order red ball tag then blue ball tag then yellow ball tag that show in image below and hit Apply to save changes to its prefab.



- h. Navigate to Assets/Prefabs/Game/Characters and duplicate one of the available character.
- *i.* Change the name of the prefab to a preferred one.
- j. Enter the character name and price to the *Character* component. Check the *isFree* option if you want to give out this character for free (it will be automatically unlocked). *Important:* the new character's name must not repeat any existing character name.



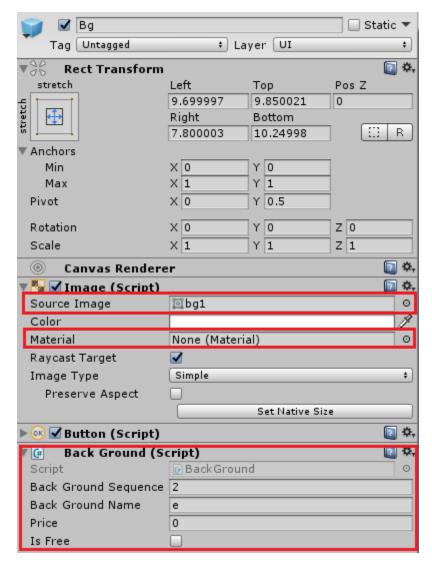
- k. Resize the character array in CharacterManager game object then drag the new character to it and hit Apply to save changes to its prefab. Important: the order in the pool object and order in character array or character sequence number must be the same.
- I. If you want to change bomb ball model just duplicate bomb ball prefab at Assest/Prefabs/Gamge/BoomPrefab then do the same like with ball character then drag it to Boom in Player object.

Now the new character has been added and ready to use in game! You will see it listed in the *CharacterSelelection* scene.

3.4 Adding more background

Out-of-the-box, this game is already packed with many background, cute and ready to use! If you want to add more, follow these simple steps:

- a. Create a background model with the pivot at the center.
- b. Navigate to *Assets/Prefabs/Game/BackGround/BackGroundPrefabs* and duplicate one of the available background prefabs.
- c. Change the name of the prefab to a preferred one.
- d. Expand this prefab you will see a child object name bg with blue cube avatar, click in this prefab.
- e. Replace the *Source Image* in the *Image* component with your new background Sprite, replace the *Material* in the *Image* component with your new background Material.
- f. Enter the background name and price to the BackGround component. Check the isFree option if you want to give out this background for free (it will be automatically unlocked). Important: the new BackGround's name must not repeat any existing background name.
- g. Resize the BackGrounds array in *BackGroundManager* game object then drag the new background to it and hit Apply to save changes to its prefab.



Now the new background has been added and ready to use in game! You will see it listed in the *BackGroundSelelection* scene.

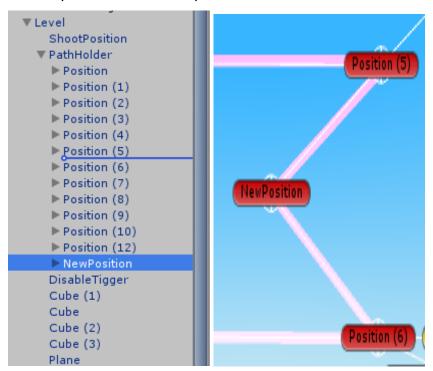
3.5 Adding more level

Out-of-the-box, this game is already packed with a few level, cute and ready to use! If you want to add more, follow these simple steps:

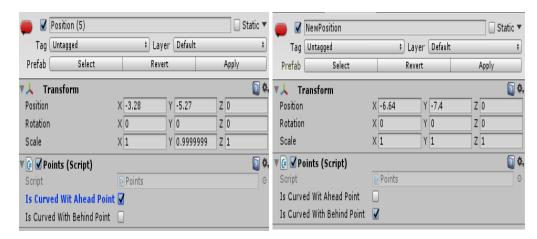
- a. Navigate to Assets/Prefabs/Game/Levels/LevelsPrefabs and duplicate one of the available level prefabs.
- b. Change the name of the level to a preferred one.
- c. Drag and drop the new level to the scene, you will also see the level in the

game window, it will show you a few errors like Assertion failed just ignore these problems it's just a problem cause by void OnDrawGizmos try to draw some line, expand this level object you will see a child object name PathHolder and ShootPosition.

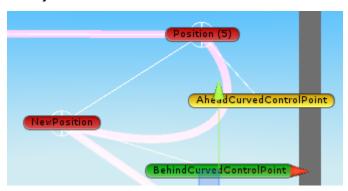
- d. Shoot Position is the position at where the new ball will be created, to change this position just move this ShootPosition object to wherever you want but in the same z axis and don't make it too close to the path.
- e. Expand PathHolder to see all position in the path, duplicate one of the available position child object to add more point to the path and in Hierarchy window drag new object to middle of the point between the two position child object that you want of PathHolder to make this point is middle point of these two points.



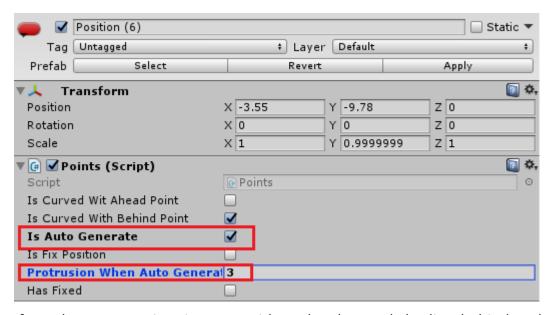
f. If you want to make a curve line just click on the position where you want the curve to start from that position and check in Is Curved With Ahead Point, then click on the next point and check in Is Curved With Behind Point.



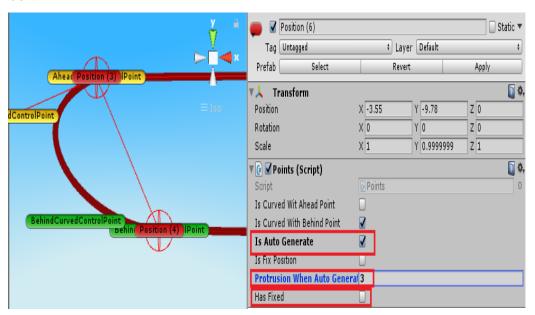
g. Expand these two points you will see two object AheadCurvedControlPoint and BehindCurvedControlPoint,then just move AheadCurvedControlPoint of the object you check in Is Curved With Ahead Point and BehindCurvedControlPoint of the object you check in Is Curved With Behind to adjust the curved line.

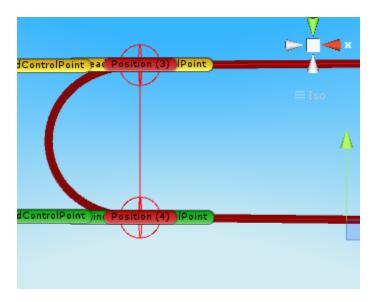


h. If you want it to auto make a curve line between these two point click in the object that you check in *Is Curve With Behind Point* box then check in *Is Auto Generate* and change *Protrusion When Auto Generate* value to adjust the peak of the curve line,uncheck *Is Auto Generate* box if you want to adjust the curve.

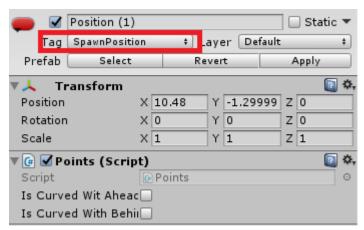


i. If you have two points is curve with each other and the line behind and ahead are parallel but these points not in the same axis as the picture below and you want to fix that, click in the position that you want to fix like position4 in the picture below then check in Is Fix Position box and go to the position which you have check in Is Curve With Behind box and check in Is Auto Generate box you will see the result, if you want to adjust the point you have fixed before and then want to fix it again just uncheck Has Fixed box.

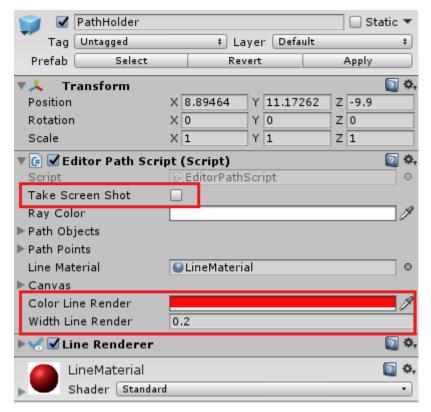




- j. Repeat from step f if you want to add more point or more curved line.
- k. If you want to change the position at where the new ball will be created in the path just click on that point and change tag to SpawPosition.



- I. Click in *PathHolder* object and change line's color and line width to the color and the width that you want.
- m. Check in *Take Screen Shot* box to create a screen shot photo for this level, this photo is used for level selection menu. Note: Open the folder contains screenshots to update it.

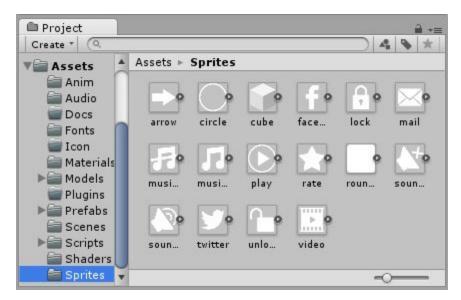


- n. Delete the prefab you have duplicated in Level folder and drag the level prefab you just adjust in scene to this folder then delete this prefab in scene window.
- o. Enter the level name and price to the Level component. Check the isFree option if you want to give out this level for free (it will be automatically unlocked). Important: the new level's name must not repeat any existing level name.
- p. Navigate to *Assets/_ProjectName/ScreenShot* and find the image with the same name as your prefab you created.
- q. Resize the Levels array in *LevelManager* game object then drag the new level and the image in step p to it and hit Apply to save changes to its prefab.

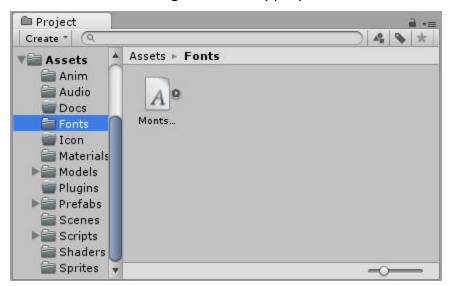
Now the new level has been added and ready to use in game! You will see it listed in the *LevelSelelection* scene.

3.6 Customizing UI

All sprites used in this game (for buttons and other UI components) are located under the *Sprites* folder. You can replace them with your own sprites to modify the UI as you like.

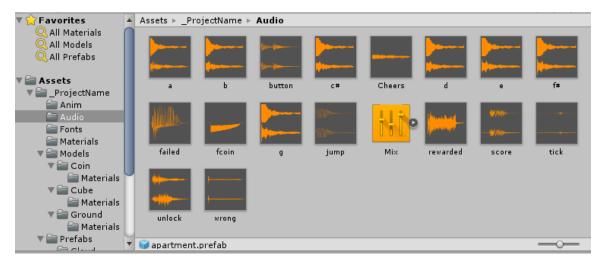


All fonts used in this game are free-to-use in commercial projects. Fonts are located under the *Fonts* folder together with appropriate license files.

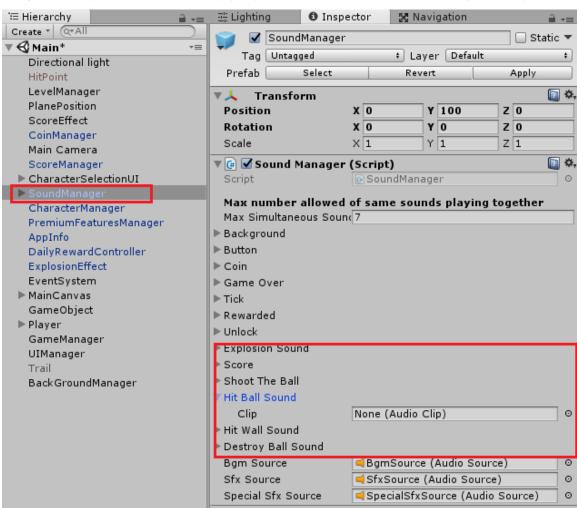


3.7 Sounds

All sounds included in this game are free-to-use in commercial projects and are located under the *Audio* folder.



This game features a *SoundManager* class to manage activities in game like playing music or mute/unmute sounds. If you want to replace sounds in this game, simply drag and drop new sounds to appropriate slots in the *SoundManager* component.



- Explosion Sound: sound will play when the bomb ball exploses.
- Score: sound will play when get score.
- Shoot The Ball: sound will play when shoot the ball.
- Hit Ball Sound: sound will play when the ball hits the orther ball in the path.
- Hit Wall Sound: sound will play when the ball hits the wall.
- Destroy Ball Sound: sound will play when get score and destroy the same color balls.

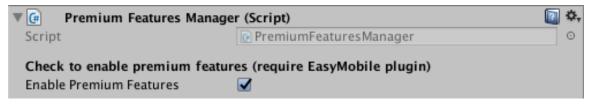
To disable which sound you don't want to have, click in that sound box and hit "backspace" key.

4 ENABLING PREMIUM FEATURES

This section provides a guide on configuring premium features for your game. As these features are implemented using Easy Mobile plugin, this guide is intended to be used alongside Easy Mobile's official user guide. Therefore, it is strongly recommended that you also read through that guide to familiarize yourself with the plugin. You can access the online user guide from menu *Window* > *Easy Mobile* > *Online Documentation* (after Easy Mobile is imported to the project).

4.1 Before You Begin

- In the Main scene's hierarchy, there's an object named PremiumFeaturesManager which contains all the relevant components from which you can configure how premium features behave in your game.
- Make sure the *EnablePremiumFeatures* option in the *PremiumFeaturesController* object is checked.

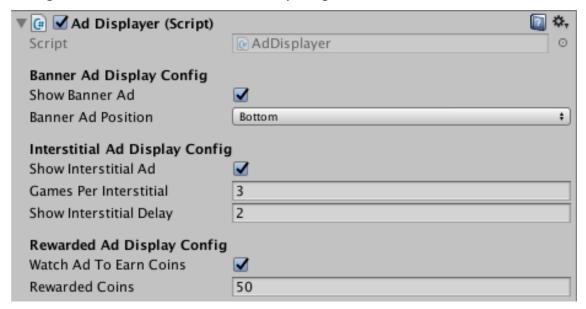


- The settings interface of Easy Mobile can be opened via menu Window >
 Easy Mobile > Settings, this is the only place to go to configure this plugin.
- Note that you won't need to write a single line of integration code for Easy Mobile to work, as the integration was done beforehand, you only need to configure the plugin in the editor (that means you can ignore all the Scripting sections in Easy Mobile user guide if you wish to).

4.2 Advertising

4.2.1 Template-specific setup

The PremiumFeatureManager object contains a component named *AdDisplayer* which is responsible for all ads displaying activities in the game. There you can configure how ads should be served in your game.



Banner ads are configured in the Banner Ad Display Config section.

- Show Banner Ad: whether to show a banner ad in game
- Banner Ad Position: which position the banner should be placed

Interstitial ads are configured in the Interstitial Ad Display Config section.

- Show interstitial ad: whether to show interstitial ads when game over
- Games Per Interstitial: how many games to be played before showing ad
- Show Interstitial Delay: how many seconds after game over that ad is shown

Rewarded ads are configured in the **Rewarded Ad Display Config** section.

- Watch Ad To Earn Coins: whether to allow the user to watch an ad to earn extra coins
- Rewarded Coins: how many coins should be awarded after watching an ad

4.2.2 Easy Mobile setup

Open Easy Mobile's settings interface to start configuring its Advertising module (see its user guide for more information). With Easy Mobile you'll have support for AdColony, AdMob, Chartboost, Heyzap (with mediation) and Unity Ads. You can

use multiple ad networks at once and have different configurations for iOS and Android. Below is the settings interface of the Advertising module.



You can setup the module in just a few steps as below. Please see the Advertising section in Easy Mobile's user guide for detailed instructions on each step.

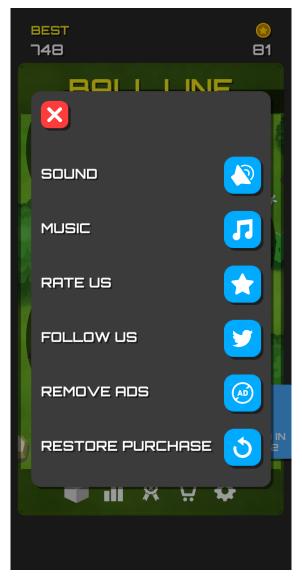
- a. Setup the ad networks you want to use, including importing the required plugins, please see Easy Mobile user guide for more information
- b. Enable auto ad-loading feature: simply leave the *Auto-Load Default Ads* option as checked and other parameters as default, the plugin will automatically load ads in the background
- c. Select default ad networks for each platform: choose your preferred network for each type of ad on each platform

That's it! Now your game is ready for showing ads!

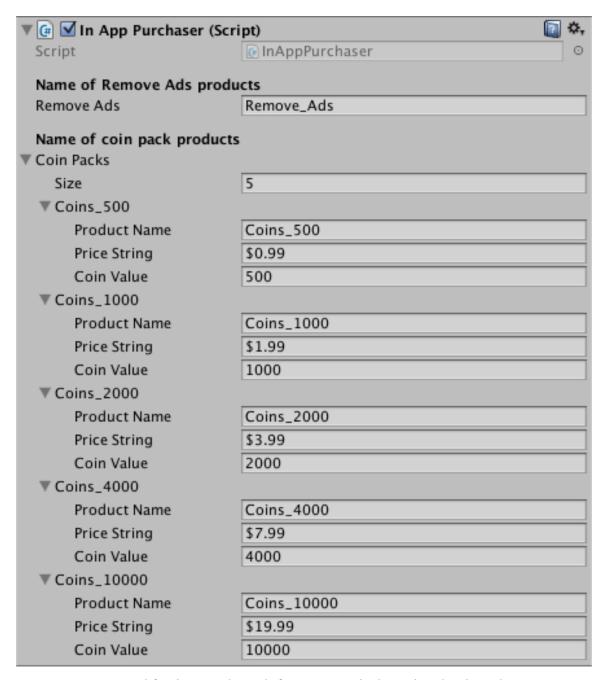
4.3 In-App Purchasing

4.3.1 Template-specific setup

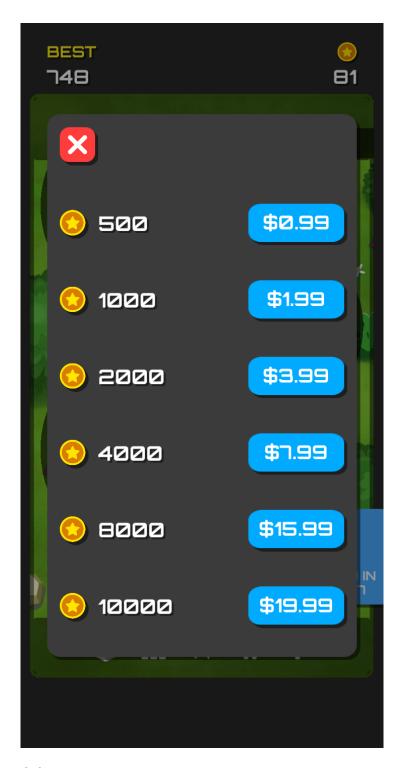
The built-in in-app purchases of this template include a *Remove Ads* button, and several coin packs. You can modify existing products and add more coin packs if you like. There's also one *Restore Purchase* button as required on iOS.



The PremiumFeaturesManager object contains a component named InAppPurchaser which manages all the in-app purchasing activities in this game.



Here you can modify the product definitions including the displayed name, price or coin value of the coin packs. To add more coin packs, simply increase the *CoinPacks* array size and enter necessary information for your new packs. The built-in store UI will automatically update to your changes in the product list without you having to do anything.



4.3.2 Easy Mobile setup

Setting up the In-App Purchasing module of Easy Mobile includes the following steps. Please see the In-App Purchasing section in Easy Mobile's user guide for

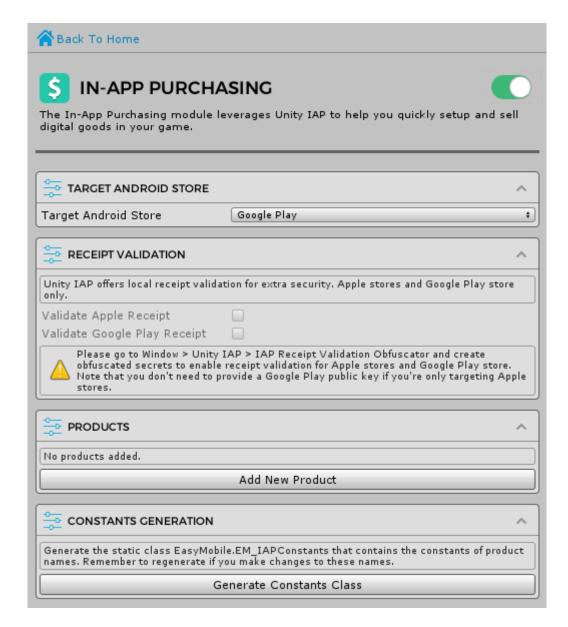
detailed instructions on each step.

- a. Enable Unity In-App Purchasing service
- b. Select target store if you're on Android
- c. Enable receipt validation if you wish
- d. Declare the products

Below is the settings interface of the In-App Purchasing module of Easy Mobile.



Note that the products declared with Easy Mobile must have names that match with the ones you have in the aforementioned *InAppPurchaser* component. Also note that *Remove Ads* is a non-consumable product, while the coin packs must be consumable.



4.3.3 Create the products for targeted stores

That last step in configuring the in-app purchasing feature is to create products for your targeted stores (e.g. Google Play and Apple App Store). Make sure the product ID, product type and price match the ones you have in your game.

4.4 Game Service

4.4.1 Template-specific setup

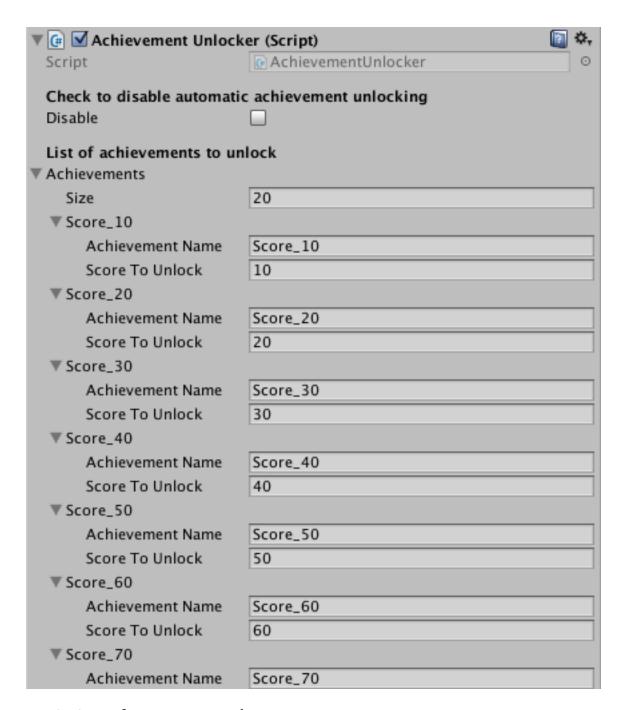
This template has a built-in leaderboard for ranking users' scores, and many achievements. It works with Game Center (iOS) and Google Play Game Services

(Android).

User's score will be submitted automatically when game over by a component named *ScoreReporter*, which is also attached to PremiumFeaturesManager object. There you can change the leaderboard name or even disable automatic score reporting altogether.



Achievements will be unlocked automatically when the user reaches a certain score. The achievement unlocking is handled by the component named *AutoAchievementUnlocker*. In this component, you can modify existing achievements and add or remove achievements. You can also disable the automatic achievement unlocking feature if you wish.



4.4.2 Setup for your targeted stores

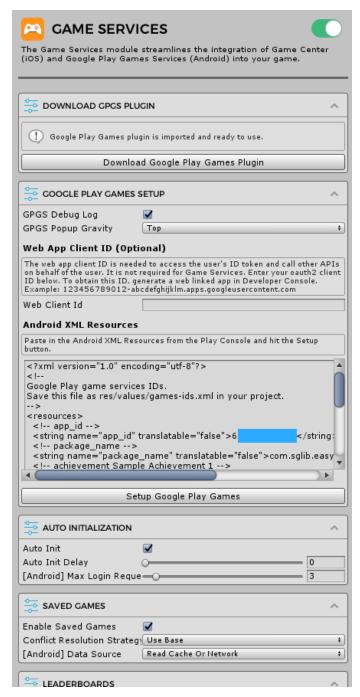
The next step is to create the required leaderboard and achievements for your targeted stores (i.e. in iTunes Connect for App Store and the Developer Console for Google Play). Take note of their IDs for use in the next step.

4.4.3 Easy Mobile setup

Setting up the Game Service module of Easy Mobile includes the following steps. Please see the Game Service section in Easy Mobile's user guide for detailed instructions on each step.

- a. Import Google Play Games plugin for Unity and setup it if you're targeting Android
- b. Enable the automatic initialization feature: just leave everything under the **AUTO-INIT CONFIG** section as default
- c. Declare the leaderboards and achievements

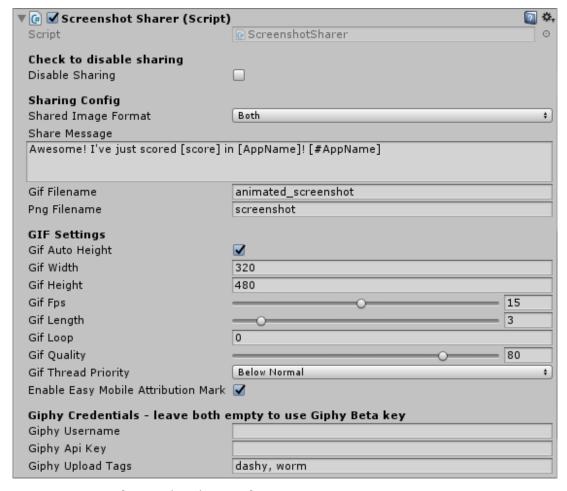
Below is the settings interface of the Game Service module of Easy Mobile.



Note that you must declare the leaderboard and achievements with the same names as the ones you have in the *AutoScoreReporter* and *AutoAchievementUnlocker* components. Also their IDs must match the ones you created in iTunes Connect and Google Play Developer Console.

4.5 Native Sharing

This template has a Share button that allows the user to share a screenshot of the gameplay (in animated GIF or static PNG format) to social networks using the native sharing functionality. This activity is managed by a component named *ScreenshotSharer*, which is also attached to the PremiumFeaturesManager object. When a new game starts, this component will setup and start a recorder to record the screen content, and stop the recorder when the game ends. The recorder automatically stores a few last seconds of the recording, and discards the rest. The recorded clip will then be exported to a GIF image, then uploaded to Giphy, and finally its URL can be shared and played automatically on major social networks including Facebook and Twitter.



Here you can configure the sharing feature.

- Disable Sharing: disable this feature
- Share Image Format: you can share GIF or PNG image, or both
- Share Message: the default sharing message, note that [score] will be

automatically replaced by actual score, and [AppName] will be replaced by the app name declared in AppInfo

- Gif Filename: filename to store the generated GIF image
- Png Filename: filename to store the captured PNG image

In the **GIF Settings** section, you can configure the generation of the GIF image.

- Gif Auto Height: automatically calculate the image height based on the specified width and the screen aspect ratio
- Gif Width: the image width
- Gif Height: the image height, will be overwritten if GifAutoHeight is enabled
- Gif Fps: frame per second of the GIF image
- Gif Length: the length of the GIF in seconds, as mentioned earlier, the recorder only keeps this many seconds of the recording, and discards old content
- Gif Loop: looping mode of the GIF; 0 means loop indefinitely, -1 means no loop, > 0 means loop a set number of times
- *Gif Quality*: quality setting value in range [1,100], bigger values mean better quality but slightly longer generation time; 80 is generally a good value in terms of quality-time balance
- Gif Thread Priority: the priority of the GIF generation thread
- Enable Easy Mobile Attribution Mark: whether to display Easy Mobile attribution when generating GIF images

You can also control the Giphy uploading activity with the following parameters:

- Giphy Username & Giphy Api Key: provide these values if you want to upload the GIF image to your own Giphy channel; otherwise leave them empty to use the Giphy beta key
- Giphy Upload Tags: comma-delimited list of tags of the uploaded image

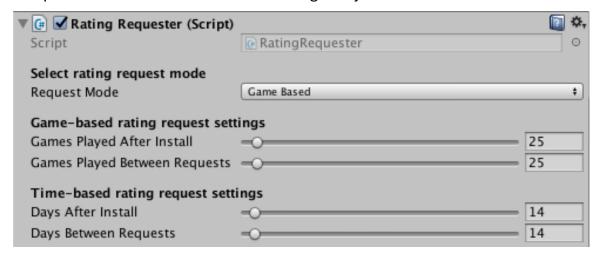
Note that you need to enable the *External Write Permission* for this feature to function properly on Android. Please see the Native Sharing section in Easy Mobile user guide for detailed instructions on doing that.

4.6 Rating Request

This template employs the Rating Request feature of Easy Mobile, to show a rate-my-app popup when game over, if some certain conditions are met. The Rating Request feature of Easy Mobile allows us to show the built-in rating prompt on iOS (10.3+) and a native rating popup on Android. Please see the Rating Request section in Easy Mobile user guide for instructions on configuring the appearance

and behavior of this popup.

You can set the conditions to show this rating popup using the *RatingRequester* component of the PremiumFeaturesManager object.



 Request Mode: whether to show the rating popup based on the number of games played (Game Based mode), or based on the time since the installation of the app (Time Based mode)

If you select *Game Based* mode, pay attention to these two variables:

- Games Played After Install: how many games should be played since the installation before a rating popup is shown
- Game Played Between Requests: how many games should be played since the last time a rating popup is shown (in case it was dismissed by the user) that a new popup can be shown

If you select *Time Based* mode, adjust these two variables:

- Days After Install: how many days after the installation that a rating popup is shown
- Days Between Requests: how many days since the last time a rating popup is shown that a new one can be shown

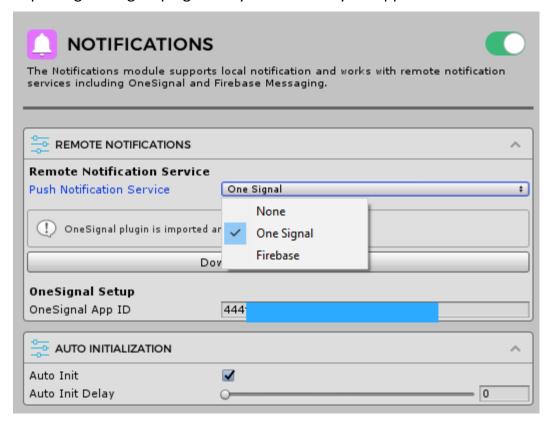
4.7 Push notification

Enabling push notification for your app using OneSignal service includes following steps. Please see the Notifications section in Easy Mobile user guide for detailed instructions on each step.

- Open the Notification tab in Easy Mobile's settings interface
- Import OneSignal plugin

- Prepare your app for push notifications, e.g. enable the Push Notification capability for the provisioning profile on iOS (please see Easy Mobile user guide as well as OneSignal documentation for detailed instructions).
- Add your app to OneSignal dashboard
- Enter your app ID to Easy Mobile settings in Unity

Below is the settings interface of the Notification module of Easy Mobile after importing OneSignal plugin and you can enter your app ID.



That's it! You've just finished implemented premium features for your game!

THANK YOU AND GOOD LUCK WITH YOUR GAMES!