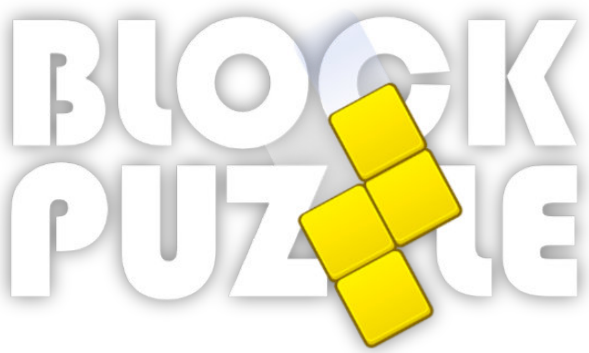
HYPER BYTE
STUDIOS



BLOCK PUZZLE SETUP GUIDE

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INTRODUCTION

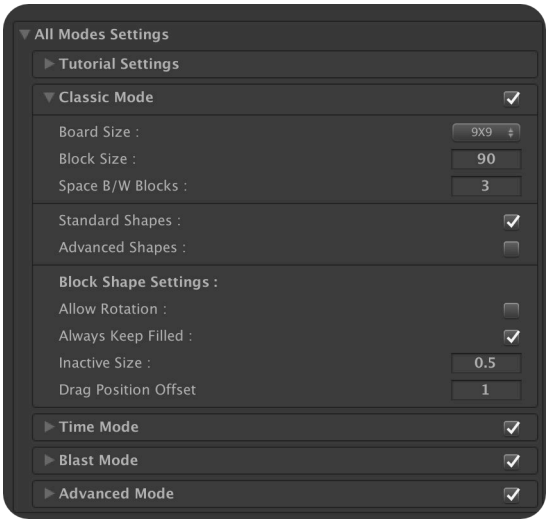
This documentation consists of details about setting up block puzzle game templates, setting up and updating game board, different game modes, basic settings like review setup, daily rewards, and other common setups. We have separate documentation for Setting up ad network, Unity IAP Setup, Localization, Theme Settings, etc. So, below is full details and guidance regarding setting up different parts of this template.

All the code Inside the game is fully commented, easy to understand and we tried to make it highly formatted. So, anyone can understand code and modify it as per the requirements.

Gameplay Settings

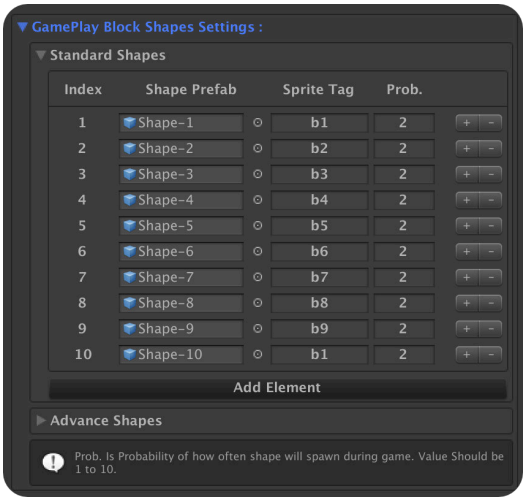
Gameplay settings include configurations like setting up different game modes, size of the board, shapes and its probability, etc. Please open Game play Settings from the **Hyperbyte > Gameplay Settings** menu item within the unity editor.

- **All Modes Settings :** Game Mode settings includes Tutorial Settings, Classic Mode, Time Mode, Blast Mode, and Advanced Mode. So here are details about the settings that are included within all modes. There are a few settings that might be specific to some modes.

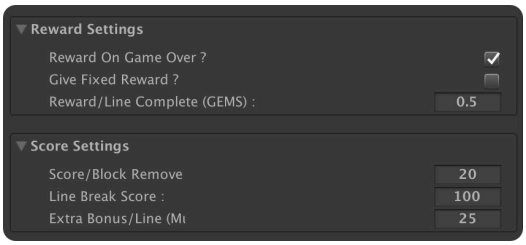


  - **Board Size:** Size of the board grid during gameplay.
  - **Block Size:** Size of the block inside the board grid.
  - **Space B/W Blocks:** Space between each block inside the board grid.
  - **Allow Rotation:** Toggle for allowing rotation of shape before placing or board.
  - **Always Keep Filled:** Turn on this toggle button of all the three shape container should be always filled, means once a shape is placed on board, new shape will be filled on the empty slot, if this toggle is off, all the shape containers will be filled only after all 3 shapes been placed on the board.
  - **Inactive Size:** Size of block shape while its inside shape container.
  - **Drag Position Offset:** Distance between shape and drag point vertically.
  - **Standard Shapes:** Standard shapes should be used for the given mode or not. Please follow the GamePlay Block Shape Settings for more details.
  - **Advanced Shapes:** Advanced shapes should be used for the given mode or not.
  - **Time Mode Settings:** Time Mode consists of the additional setting for the initial timer. The timer will start reducing each second and reaching timer to zero will result in a game over, Users will be able to increase the timer bar by clean lines.

- **GamePlay Block Shapes Settings:** Block Shapes settings contain the list of shapes that should be used during the game and the probability of spawning on each shape. Block shapes are divided into 2 parts. Standard and advances. The standard shape contains all the classic shapes that normally used on the block puzzle games while Advanced shapes contain some uncommon unique shapes. The Sprite tag contains the information of image that should be used on the shape, please refer to theme settings for further information on this.



- **Reward Settings:** Reward setting contains configuration for the reward during game. Below are details for each field.



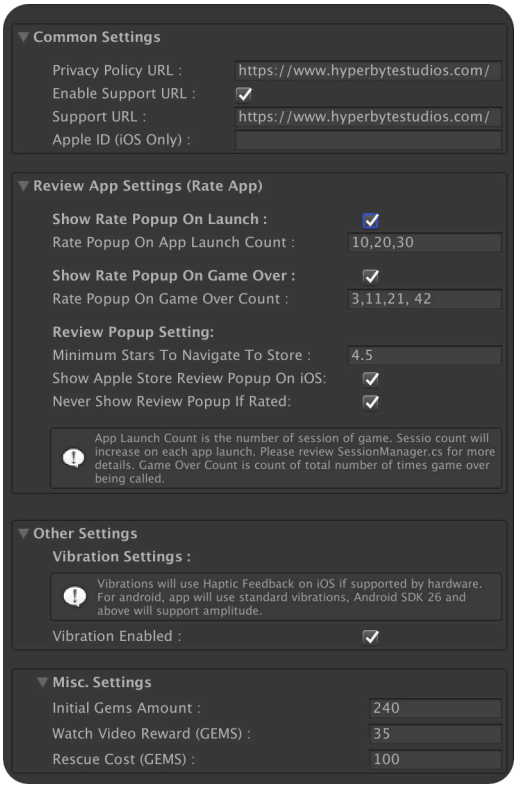
  - **Reward On Game Over:** Whether the user should be given a reward on the game over or not.
  - **Give Fixed Reward?** If this enabled means user will receive the exact fixed amount mentioned as a game reward. If this is turned off, the user will receive a reward for the number of lines completed.
- **Score Settings:** This setting includes configuration for the score during gameplay.
  - **Score/Block Remove:** Amount of score that should be added for each block cleared.
  - **Line Break Score:** Amount of score that should be added for clearing each line.
  - **Extra Bonus/Line (Multiple):** Amount bonus score for clearing more than 1 line at the same line. The amount of bonus will be in multiplication means the more line you clear at once, the more score will be given per line.

App Settings

App Settings is the main configuration regarding common settings like URLs, privacy policy, support URL along With review settings, daily rewards settings, and currency and reward related settings. Please open App Settings from the **Hyperbyte > App Settings** menu item within the unity editor. Though, Everything is self-explanatory, here are some details about App Settings.

- **Common Settings :** Common settings includes privacy, support and store selection related details.
  - **Current Store:** Select the current Android Store from Google, Amazon, and Samsung.
  - **Privacy Policy URL:** Link to the privacy policy.
  - **Enable Support URL:** If enables, the user will be able to visit the support page from Settings.
  - **Apple ID:** Applies only for iOS, used for review page navigation, and In-Game Review page.

- **Review App Settings:** These Settings configures how often a user should be asked to review the app and when the user should be prompted. While iOS will user in-built review system, but unity editor and android will use a custom review popup, User will have to select starts, and then the user will be navigated to the respective store.



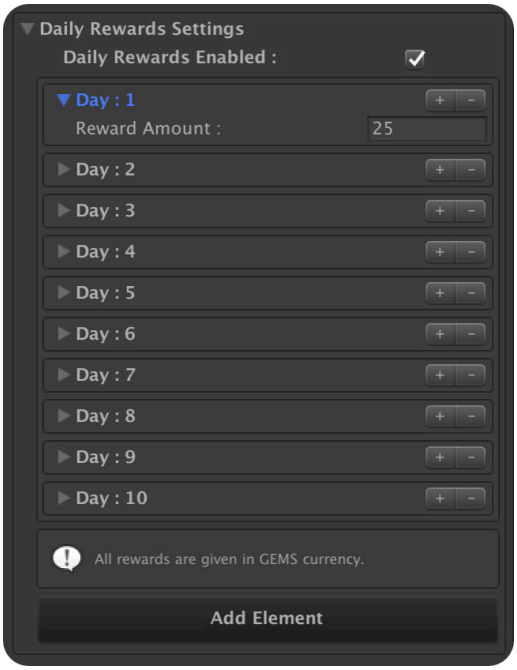
    - **Show Rate Popup On Launch :** If user needs to prompt for rate app on launch, please enable this toggle. Also, mention the on which sessions of app, user needs to prompt for reviewing app. Please follow **SessionManager.cs** script component for further modification of the code.
    - **Show Rate Popup On Game Over :** If user needs to prompt for rate app on game over, please enable this toggle. Also, mention the on which sessions of app, user needs to prompt for reviewing app.

  *Please follow **Canvas-Popups ~> ReviewAppScreen** Game Object in the scene hierarchy for further customisation of review screen.*

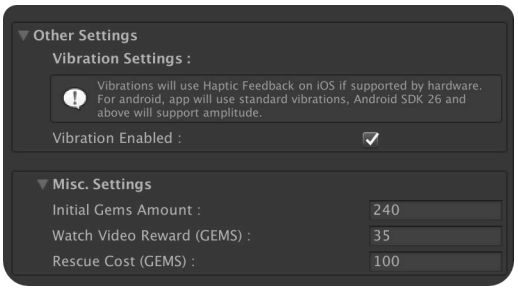
- **Daily Rewards Settings:** Users will be rewarded with certain rewards every day based on settings. Missing any day to collect reward will result in start-over from day 1. Daily rewards will give rewards in Gems Only.

  Daily rewards can be configured for as many days as many needed. Daily rewards will start over from day 1 once all configured days are over. Please see DailyRewardManager.cs script component for further customisation.

  *Please follow **Canvas-Popups ~> DailyRewardScreen** Game Object in the scene hierarchy for further customisation of review screen. Also see **DailyRewards.cs** and **DailyRewardPanel.cs** script component for further code customisation.*



- **Vibration Settings:** Vibrations should be used or not? Vibrations will use Haptic Feedback on iOS if supported by hardware. For android, the app will use standard vibrations, Android SDK 26, and above will support amplitude.
- **Misc Settings:** Misc settings include rewards, initial gems balance, reward to be given for watching the rewarded video, and the number of gems required to rescue the game.



Using Haptic Feedback :

This game template has in-built support for iOS haptic feedback. While, iOS has dedicated hardware for haptic feedback, few devices (older) does not have hardware for that. This plugin will use haptic while supported and if device does not support, vibration will be used. For android, API 26 and above uses amplitude to generate haptic vibrations, if device API is lower then 26 or does not support amplitude then, app will use vibration. Android needs "**android.permission.VIBRATE**" permission which will be added automatically to **AndroidManifest.xml** Please see attached image to see how to use haptic feedback.

```
/// Play Haptic/Vibration Light.
public void PlayHapticLight() {
    if(ProfileManager.Instance.IsVibrationEnabled) {
        HapticFeedbackGenerator.Haptic(HapticFeedback.FeedbackType.LightImpact);
    }
}

/// Play Haptic/Vibration Medium.
public void PlayHapticMedium() {
    if(ProfileManager.Instance.IsVibrationEnabled) {
        HapticFeedbackGenerator.Haptic(HapticFeedback.FeedbackType.MediumImpact);
    }
}

/// Play Haptic/Vibration Heavy.
public void PlayHapticHeavy() {
    if(ProfileManager.Instance.IsVibrationEnabled) {
        HapticFeedbackGenerator.Haptic(HapticFeedback.FeedbackType.HeavyImpact);
    }
}
```

Using Tween :

This game template has in-built support for tween animations. Tween animations typically works and makes easy to use small animations like transitions, scale, UI related animations like color change, image fill, anchor positions etc. This code works in almost similarly way like dotween incase you ever used it.

Here is small example of code snipper that explains how to use tween. Tween supports delay, loop, transition, tween selection and tween animation curve. Also, it supports callbacks like complete callback, loop complete callback etc.

Note, This tool is made with very limited features that requires for this game template and there might not be wide amount of methods.

- **Simple Tween :** Simple tween needs tween type with target value and duration of transition time. Suppose an object needs to move to certain position in given time then it would be like this.

```
//Moves object to position (x = 10, y = 0, z = 0) in 1 second of transtion.
transform.Position(new Vector3(10,0,0), 1F);
```

- **Add Easing :** With the transition there is option to use easing,, it can be added by selecting supported easing or by adding animation curve.

```
//Moves object to position (x = 10, y = 0, z = 0) in 1 second of transtion with linear ease.
transform.Position(new Vector3(10,0,0), 1F).SetEase(Ease.Linear);
```

- **Add Animation Curve** : Instead of only using ease, an animation curve can be added as transition effect.

```
public AnimationCurve transtionCurve;
void Animate()
{
    // Moves object to position (x = 10, y = 0, z = 0) in 1 second of transtion with animation curve as ease.
    transform.Position(new Vector3(10,0,0), 1F).SetEase(Ease.Custom).SetAnimation(transtionCurve);
}
```

- **Set Loops :** Animation can be repeated by setting loops count, setting loop count 0 will result in infinite animation.

```
// Moves object to position (x = 10, y = 0, z = 0) in 1 second of transtion with linear ease and 10 loops.
transform.Position(new Vector3(10,0,0), 1F).SetEase(Ease.Linear).SetLoop(10, LoopType.Loop).OnLoopComplete((loopIndex) =>
{
    // Do Something here.
});
```

- **Completion Callback :** It's important to fetch and use animation completion callback to take appropriate action on completion.

```
// Moves object to position (x = 10, y = 0, z = 0) in 1 second of transtion with linear ease.
transform.Position(new Vector3(10,0,0), 1F).SetEase(Ease.Linear).OnComplete(() =>
{
    // Do Something here.
});
```

Apart from simple transition effects, tween also supports transform, gameobject, image, text, rect transform also for the tween. Here is small example of few of those.

```
// Set color of image.
GetComponent<Image>().SetColor(Color.red, 1.0F);

// Fill the image. Normally used with bar etc ojects.
GetComponent<Image>().FillAmount(0.5F, 1.0F);

// Set text color.
GetComponent<Text>().SetColor(Color.green, 1.0F);

// Anchor Position X of rect transform.
GetComponent<RectTransform>().AnchorX(10, 1.0F);

// Set Anchor Position.
GetComponent<RectTransform>().AnchoredPosition(new Vector3(10,0, 0), 1.0F);

// Scale of object. can be used with transform also.
GetComponent<RectTransform>().LocalScale(Vector3.one * 0.5F,  1.0F);
```

FAQs :

- **How to create new shapes?** Each shapes are basically a set of grid. There is pre created grids of different sizes from which any shape can be created. Duplicate prefab of choice based on the size of new shape. You can select shape prefab from **BlockPuzzle ~> Prefabs ~> ShapeTemplates.** Now, Simply keep blocks of the same that are part of the forming shape and disable rest blocks inside the prefab. In simple words, grid will stay it is but blocks that won't be part of forming shape needs to be disabled. Once shape is created, save it as new prefab.

  Now, Open Game Settings and see for GamePlay Block Shape Settings and add the new shape. New shape should be seen during game.

Wrap Up

While we tried to involve most stuff in the documentation, though, in case if you have any further trouble, be sure to get in touch and will assist on the issue.

If you liked asset content and quality, be sure to share your feedback on the asset store. Also, be sure to get in touch for any further queries, suggestions, bugs, or feature requests.

Website : https://www.hyperbytestudios.com

Email : support@hyperbytestudios.com

THANK YOU