WeatherClock2D: An easy 2D time and weather controller

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SECTION 1

Brief Introduction to WeatherClock2D

WeatherClock2D has been designed to allow the users for managing the time and weather of its 2D game with a single gameObject and script. Save your development time by using WeatherClock2D and provide your game with environmental behavior.
With WeatherClock2D you can define the time and weather of your 2D game in a quickly and easy way. The package includes a scene, a set of particle systems and prefabs to try and deploy in your own game the functionalities as well as an in-depth documentation. You can define if the time comes from the system or if the time is simulated. In addition, you can customize the seasons, their duration, their environmental phenomenons together with the possibilities of having these phenomenons. You can modify even the light changes provoked by each phenomenon.
The most relevant features of WeatherClock2D are the following:

- Real time clock and simulated clock. For the last one, you can edit the seconds per minute.
- WeatherClock2D counts with seconds, minutes, hours, days, weeks, months, giving also the possibility of editing the days per month.
- Possibility to establish the color light for the different periods of the day.
- Possibility to edit for each season both the start and end months, the particle systems for the attached phenomenons and the probabilities of launching each phenomenon.
- Possibility to deactivate seasons and define the particle system for the phenomenons and probabilities for no season use case.

- Possibility to add a phenomenon color for each particle system to fusion the day light with the phenomenon light.
- Possibility to modify the interpolation factor to achieve the desired light.

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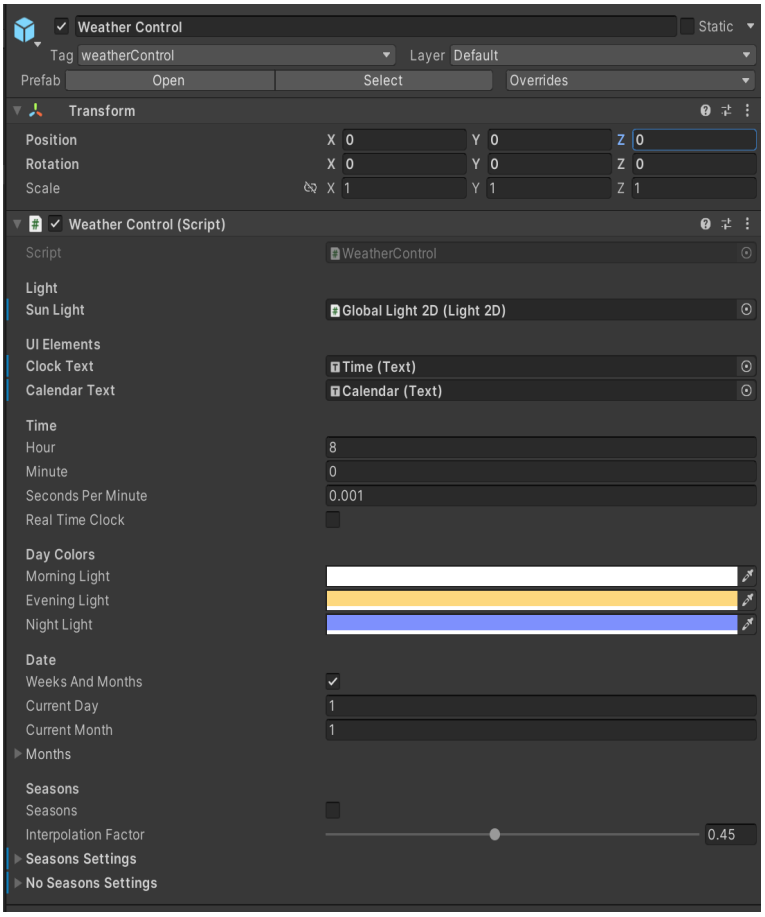
How to use WeatherClock2D

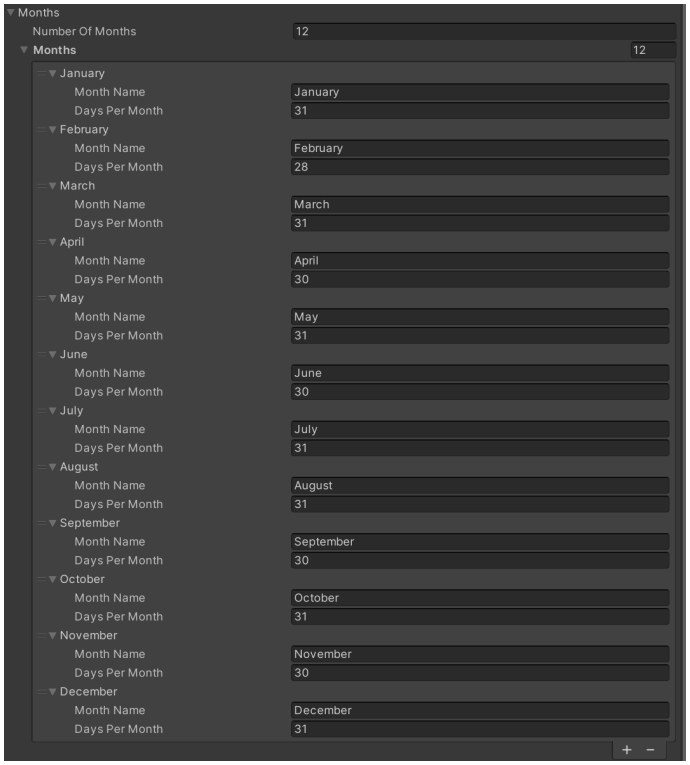
WeatherClock2D is very easy and intuitive, to use it you just add the Weather Control prefab to your hierarchy. This prefab contains the WeatherControl script, which has the following options and parameter to tune:



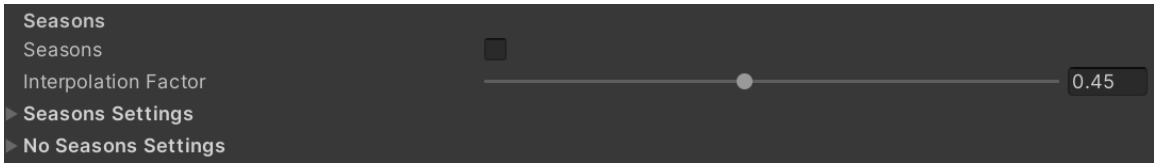
Firstly, you need to attach a Light 2D to the script, to control the light day. Then, you can choose if you use the real time clock, which takes the time from your system, or if you prefer to simulate the time. In case you select the simulated time, you can customize the seconds per minute for the correct daily loop of your game.

After that, you can control the morning, evening and night colors in order to adapt the light to the hour of the day.

In addition, you can customize the number of months that you want to define along with the name and days per month for each of them. The following Figure shows an example of this customization by adding the 12 existing months with their names and days.

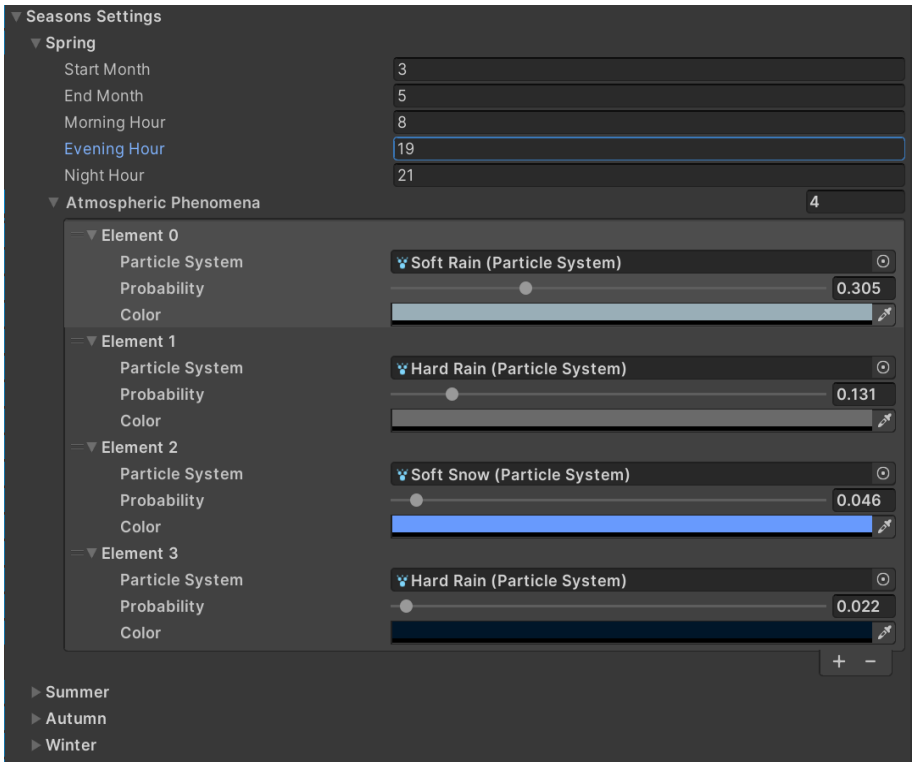


Finally, you have one section named Seasons where you can check if you want to add seasons or not and the configuration for each of the two cases. Whatever you decide, you have an interpolation factor with the aim of dynamically changing the light depending on the current phenomenon. As you will see in the following paragraphs and figures, you can define atmospheric phenomena not only for each season but also when you have not any seasons.

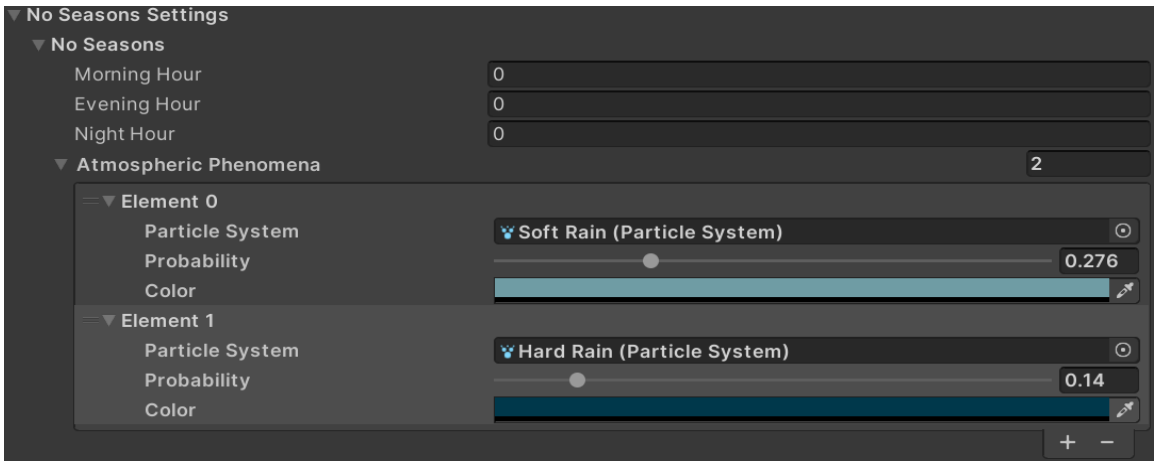


If you decide to add seasons you could define for each season the start month, the end month, the morning, evening and night hours as well as a list of custom atmospheric

phenomena. For example, next Figure shows an example setting for spring. For each phenomenon, you can tune the particle system that you want to use, the probability of having this phenomenon and the environmental color.



However, as it was previously said, you can also deactivate seasons and work without them, having also the possibility of defining these atmospheric phenomena in the same way that when there are seasons.



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Setting up a scene for using WeatherClock2D

One important thing to take into account is that WeatherClock2D uses a 2D Light from URP unity pipeline. In addition, you should add a lit material to each gameObject in order to being affected to light changes.