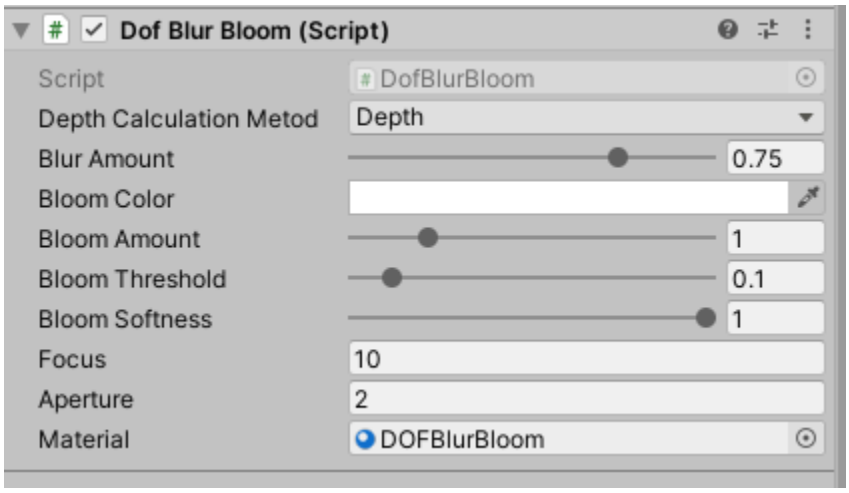
FAST DEPTH OF FIELD BLUR BLOOM

This asset consists of shaders for applying depth of field to the scene. During development the main goal was to aximally optimize the well-known toon shading technigue, keeping the quality of the final image. The shader was tested on the low-end mobile device in loaded scene.

How to apply:

1. **Add DofBlurBloom.cs script to Camera object**



Note that if you pick Color option for the Bakground, do not forget to set its apha value to max. By default it is zero.

2. **Attach DOFBlurBloom material to Material property of the script**
3. **Depth Calculation method has two options. Depth which uses depth texture and Custom materials which require to use the custom materials. So if you picked Depth skip the next step**
4. **If you picked Custom materials mode all objects in your scene should have only materials from SupGames/DOFBlurBloom.**
    a. **Unlit**
    b. **Diffuse**
    c. **Specular**
    d. **Bumped Diffuse**

e. **Bumped Specular**
f. **Transparent(Cutout)**

PARAMETERS

- **DEPTH CALCULATION METOD – Has two options:**
  - **Depth -** depth data calculated from the camera depth texture
  - **Custom materials –** depth data is stored in the custom materials. So for observing the depth of field effect you must use only custom materials in this mode. **This approach is much faster than depth mode and the difference may be noticed in the low end devices.**
- **BLUR AMOUNT –** level of blur on your scene
  - **Try to keep Blur amount values as low as possible, it will boost your performance.** Here is the scheme of passes according to blur amount or bloom diffuse:
    - **0 – 0.25 1 pass**
    - **0.26 - 0.5 2 passes**
    - **0.51 - 0.75 3 passes**
    - **0.76 - 1 5 passes**
- **BLOOM COLOR –** color of the bloom effect
- **BLOOM AMOUNT –** amount of bloom applied to final image
- **BLOOM THRESHOLD –** threshold of the bloom in the image. Keeps bright parts.
- **BLOOM SOFTNESS –** softness of the thresholded part.
- **FOCUS –** focus distance of the camera. Zone where final image were not be blurred
- **APERTURE** – value which determines the level of DOF. Determines the area from the focus point which won't be blurred. Less the value of the aperture, more area would be focused.

SHADERS

- **DOF – The fastest depth of field shader in the Asset Store.** Runs at **46-55** fps on low-end device (Meizu M2 note)
- **Unlit –** Modified and optimized version of standart mobile Unlit shader.
- **Diffuse** - Modified and optimized version of standart mobile Diffuse shader
- **Specular -** Modified and optimized version of standart mobile Specular shader.
- **Bumped Diffuse -** Modified and optimized version of standart mobile Bumped Diffuse shader.
- **Bumped Specular -** Modified and optimized version of standart mobile Bumped Specular shader.
- **Transparent** - Modified and optimized version of standart Cutout shader.

All the testing was made on low-end mobile device Meizu M2 Note in the scene containing:
-101 **different gameObjects**,
-101 **different Materials**,
-51 **different Textures**,
-1 **Directional Light(realtime)**,
-**approximately 45k polygons**