**Assignment: 5**

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**Difference between HDR Fusion and HDR Toning**

**HDR FUSION:**

* HDR stands for High Dynamic Range and is a process through which multiple images are combined to increase the final image's overall dynamic range using an HDR editor like Aurora HDR.
* It represents the full dynamic range of the visible spectrum. In Photoshop, the luminance values of an HDR image are stored in 32 bits (32 bits per layer). The luminance values in an HDR image are directly related to the amount of light in a scene.
* An HDR image therefore contains brightness levels exceeding the display capacity of a standard monitor (24 bits). For this reason, Photoshop allows us to adjust an HDR preview.
* "Exposure Fusion" just refers to a certain type of the tone mapping of an HDR image. Exposure Fusion takes the best bits from each image in the sequence and seamlessly combines them to create a final ‘Fused’ image. Or more technically, the fusing process assigns weights to the pixels of each image in the sequence according to luminosity, saturation, and contrast, then depending on these weights includes or excludes them from the final image and because Exposure Fusion relies on these qualities, no data is required, and indeed, if we wanted to, we could include an image with flash to bring darker areas to life.

**HDR TONING:**

* Tone Mapping simply involves the reprocessing and remapping of your HDR image's tones from a high dynamic range to a relatively lower and more consistent tonal value, having marked changes in contrast and/or color details.
* Tone mapping procedures are used to locally adjust image’s shadow and highlight details. A tone-mapped image file can be saved in an easily displayable format like JPEG or TIFF for designated use or display.
* It is not possible to always have a multi-exposure shot that allows us to do a DHR merge. Photoshop works around this problem with the help of HDR toning, which simulates the result of merging multiple images.
* To do this, the software applies a tone curve reducing the overall contrast of the image. The luminance of each pixel is then altered evenly so that all data fits within the HDR luminance range.
* HDR Toning, unlike HDR Fusion, does not produce an adjustment layer. It is therefore wise to produce a copy of the layer for safety.
* Choose in the menu Image / Adjustment / HDR toning.
* A new window will then appear allowing various adjustments:

1. **Presets**: This drop-down menu offers different presets that can then be customized according to different methods: Exposure and gamma, Highlight compression, Histogram equalization and Local adaptation.
2. **Method**: Highlight Compression and Histogram EQ normally don’t   
   give you access to any adjustments, while Exposure and Gamma allow you to adjust these settings. Local adaptation, however, offers several tweaks.
3. **Edge glow**: Allows you to set the intensity and radius of the edge glow.
4. **Tone and detail**: It allow you to adjust gamma, exposure, and detail, which can help remove or create blur.
5. **Advanced**: Allows you to adjust the shadows, gray or lighten the high-  
   lights (selector) as well as adjust the vibrancy and saturation.
6. **Toning curve histogram**: Allows you to view the histogram and to adjust the curves

**Below are the steps on How to tone an image in photoshop:**

**Step 1.** Open the desired image you’d like to Tone Map

**Step 2.** Select the appropriate tool to begin: “Image => Adjustments => HDR Toning”

**Step 3.** Use the Default preset. Simply fine-tune the settings of the “Default” until the image attains a suitable or desirable appearance.

**Step 4.** Adjust the slider settings to attain the desired appearance. Keeping the values low is one of the surest ways of reaching a natural-looking result. The result? A tone-mapped image.

**Step 5.** Save to your choice format.