DKV 590

3D DIGITAL SCULPTING

WEEK 12 3D Lighting in blender

LECTURER Tim Dosen ID590

MISSION

DESAIN KOMUNIKASI VISUAL UMN

01 **Menyelenggarakan** proses pembelajaran yang didukung tenaga pengajar berkualitas dan kurikulum up to date yang link and match dengan dunia industri.

02 **Melaksanakan** program penelitian yang memberikan kontribusi bagi pengembangan Desain Komunikasi Visual berbasis ICT.

03 **Memanfaatkan** ilmu Desain Komunikasi Visual dalam rangka melaksanakan pengabdian kepada masyarakat.

Week 12

Final Exam Preparation

Kriteria UAS

1. 1 Karakter full body sculpting (additional character diperbolehkan, misanya hewan atau robot tambahan)
2. Karakter tidak wajib di retopology, jika di retopology maka harus menyertakan hasil sculpting dan progress retopology berupa screenshot / video.
3. Karakter wajib berwarna / painting. (Boleh menggunakan painting langsung pada sculpting atau menggunakan retopology + texturing).
4. Pose dinamis, namun boleh menggunakan pose t-pose atau default pose
5. Tidak wajib menggunakan pedestal.

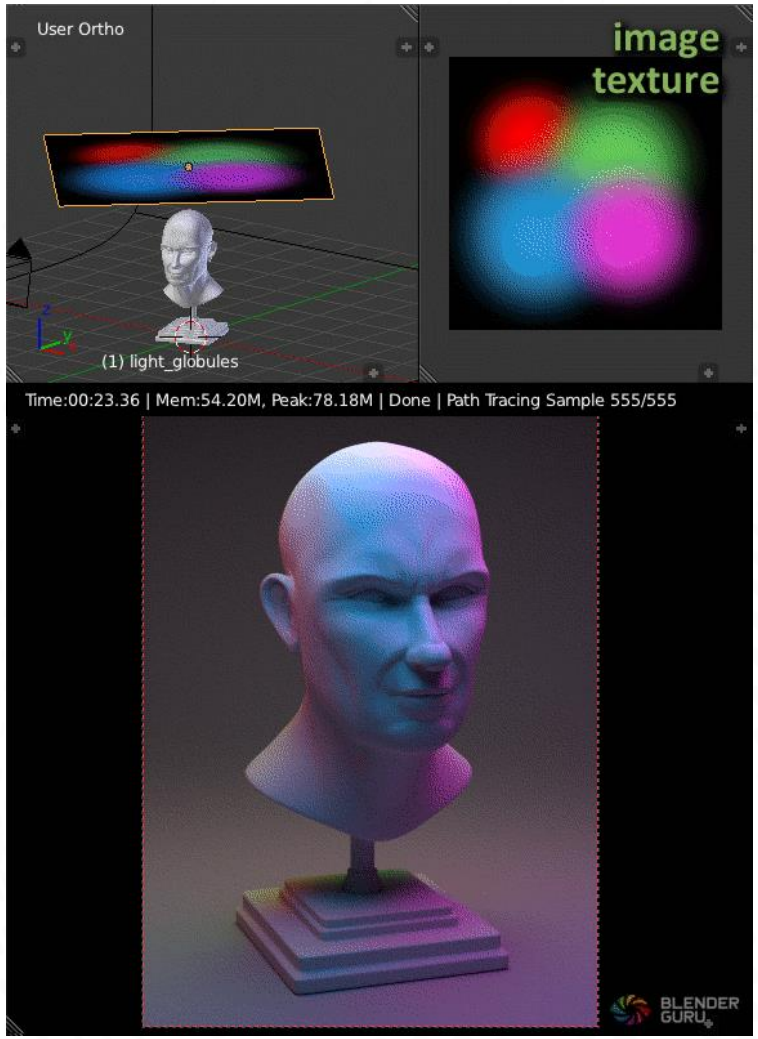
Week 12

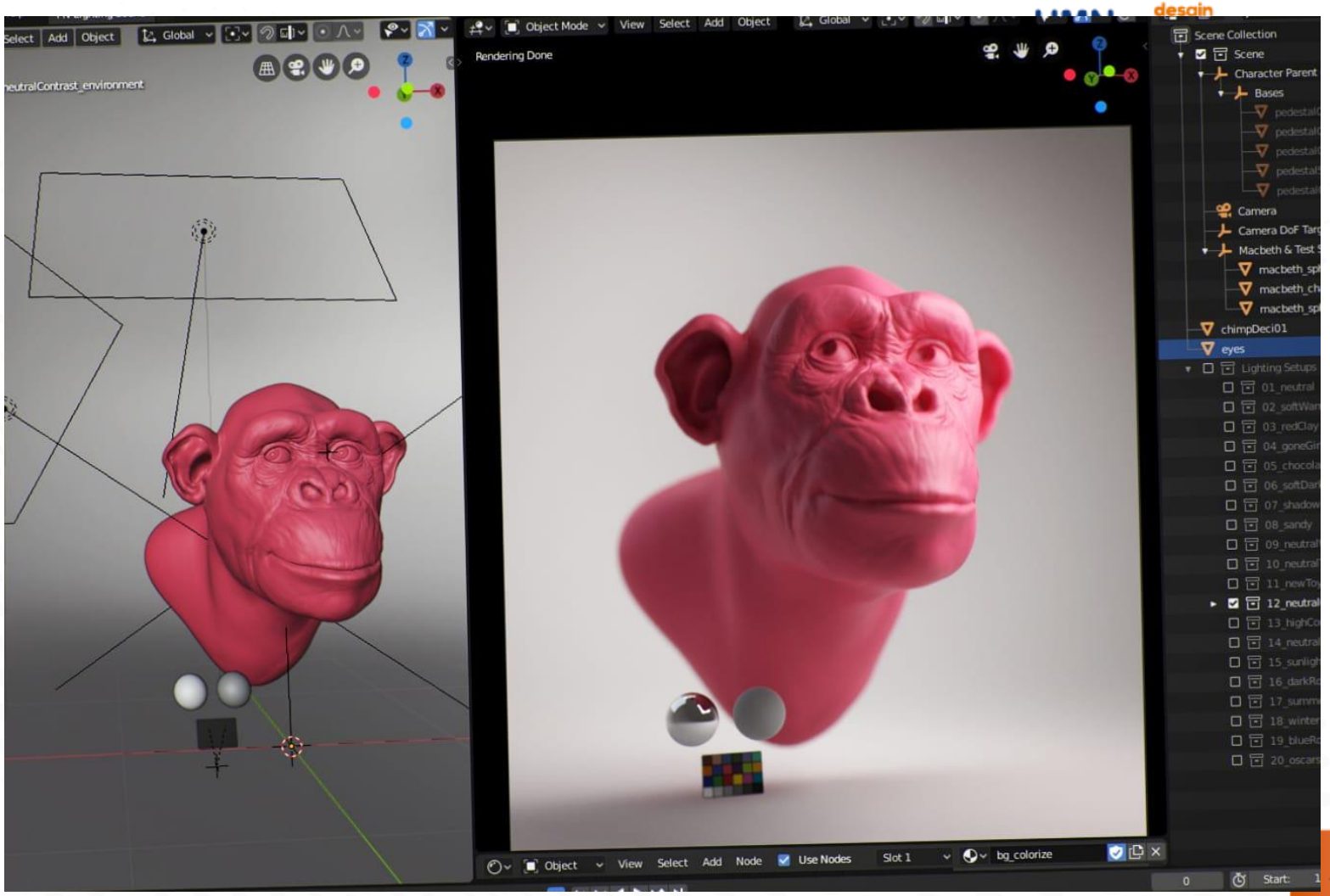
Lighting

Lighting

Lighting is a fundamental element in both real-world photography and 3D computer graphics. It refers to the way light sources are used to illuminate a scene, impacting how objects are perceived, their colors, and their overall realism.

In the context of Blender, lighting involves placing and configuring virtual light sources to achieve the desired visual effects. The way you light your scene can dramatically influence its mood, atmosphere, and visual impact



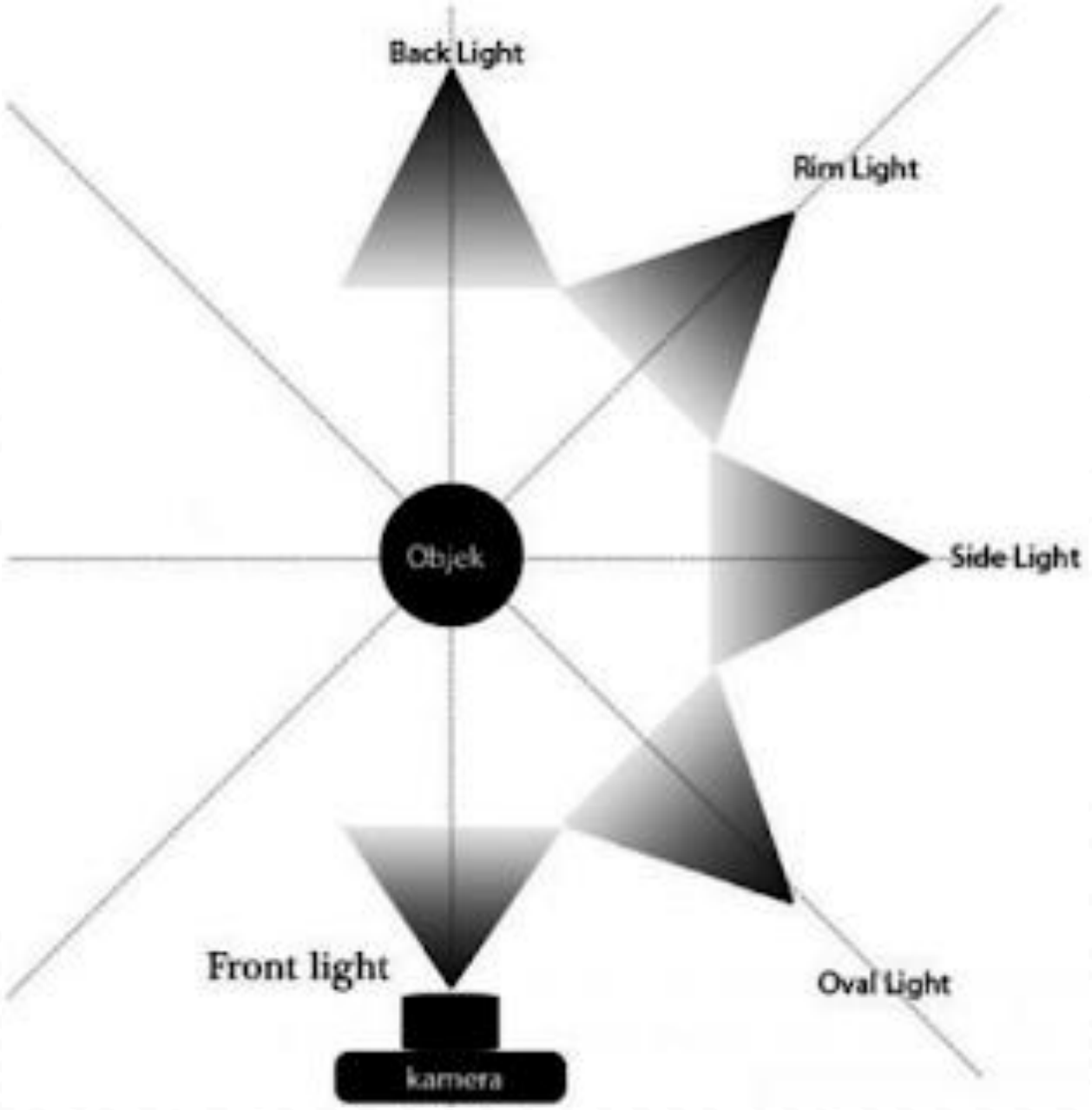


Lighting in Photography

Before we dive into the specifics of lighting in Blender, it's essential to understand the basic theory of lighting in photography. The principles of light and how it interacts with objects are foundational, not just in photography but in any visual medium, including 3D rendering. By grasping these core concepts, you'll be better equipped to apply them effectively in your Blender projects.

Lighting in Photography

1. *Front Light*
2. *Oval Light*
3. *Side Light*
4. *Rim Light*
5. *Back Light*
6. *Top Light*



Front Light

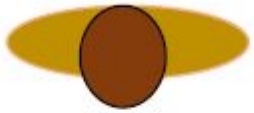
Front lighting is a lighting technique in photography where the light source is positioned directly in front of the subject, illuminating it head-on. This type of lighting is characterized by its even and flat illumination, which minimizes shadows on the subject's face or surface.

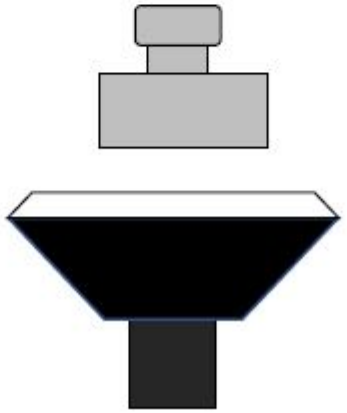
Front Light

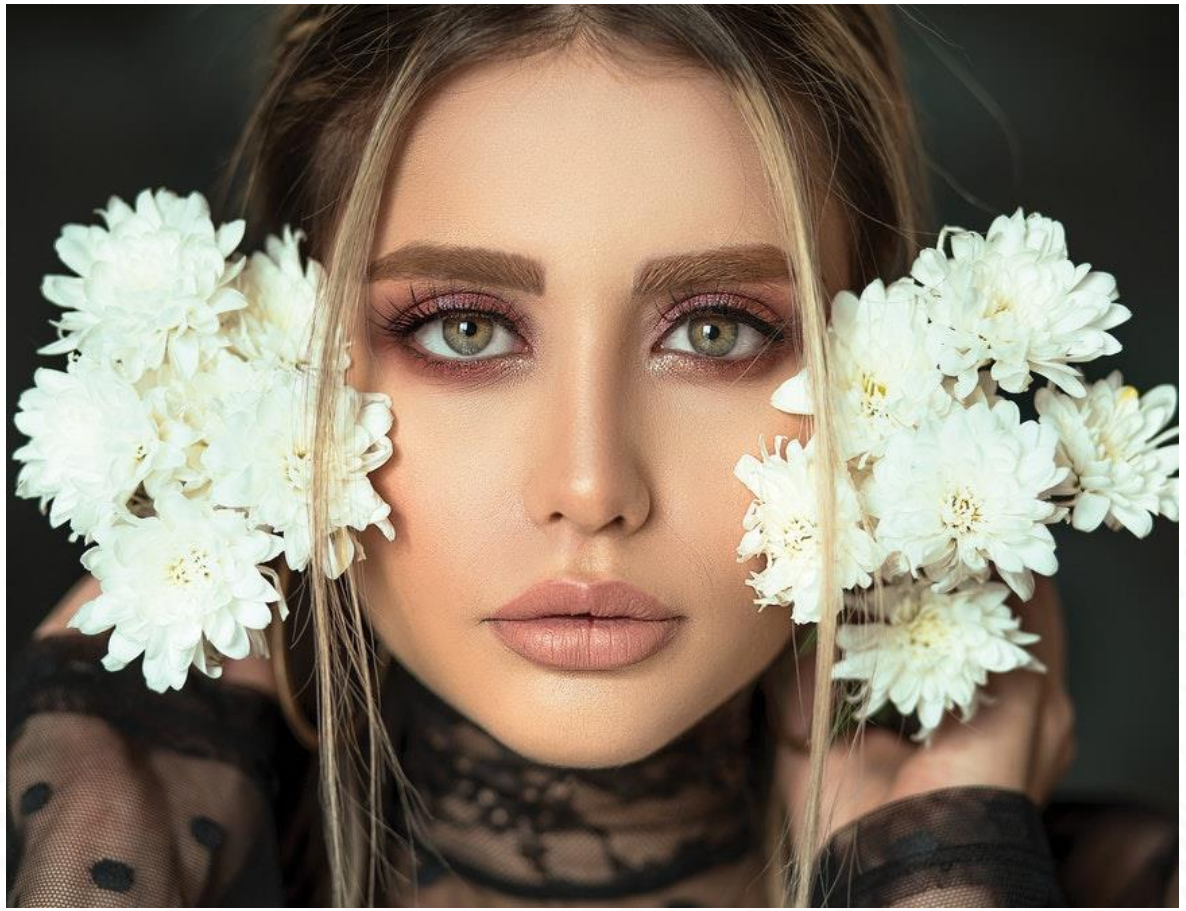
Here are some key points about front lighting:

- Even Illumination: Because the light comes from the front, it spreads evenly across the subject. This helps in highlighting details and creating a well-lit appearance without strong contrasts.
- Minimized Shadows: Front lighting reduces shadows, as the light fills in the areas that would otherwise be in shadow. This makes it ideal for capturing clear and detailed images, especially in portraits and product photography.
- Softening Features: While it can flatten out textures and details, front lighting is excellent for minimizing blemishes and imperfections, making it a popular choice for beauty and fashion photography.
- Lack of Depth: One drawback of front lighting is that it can make the subject appear flat and two-dimensional. Without shadows to define edges and contours, the image might lack depth and volume.
- Versatility: This lighting technique is easy to set up and control, making it a versatile option for various types of photography, from portraits to macro shots.

Front Lighting





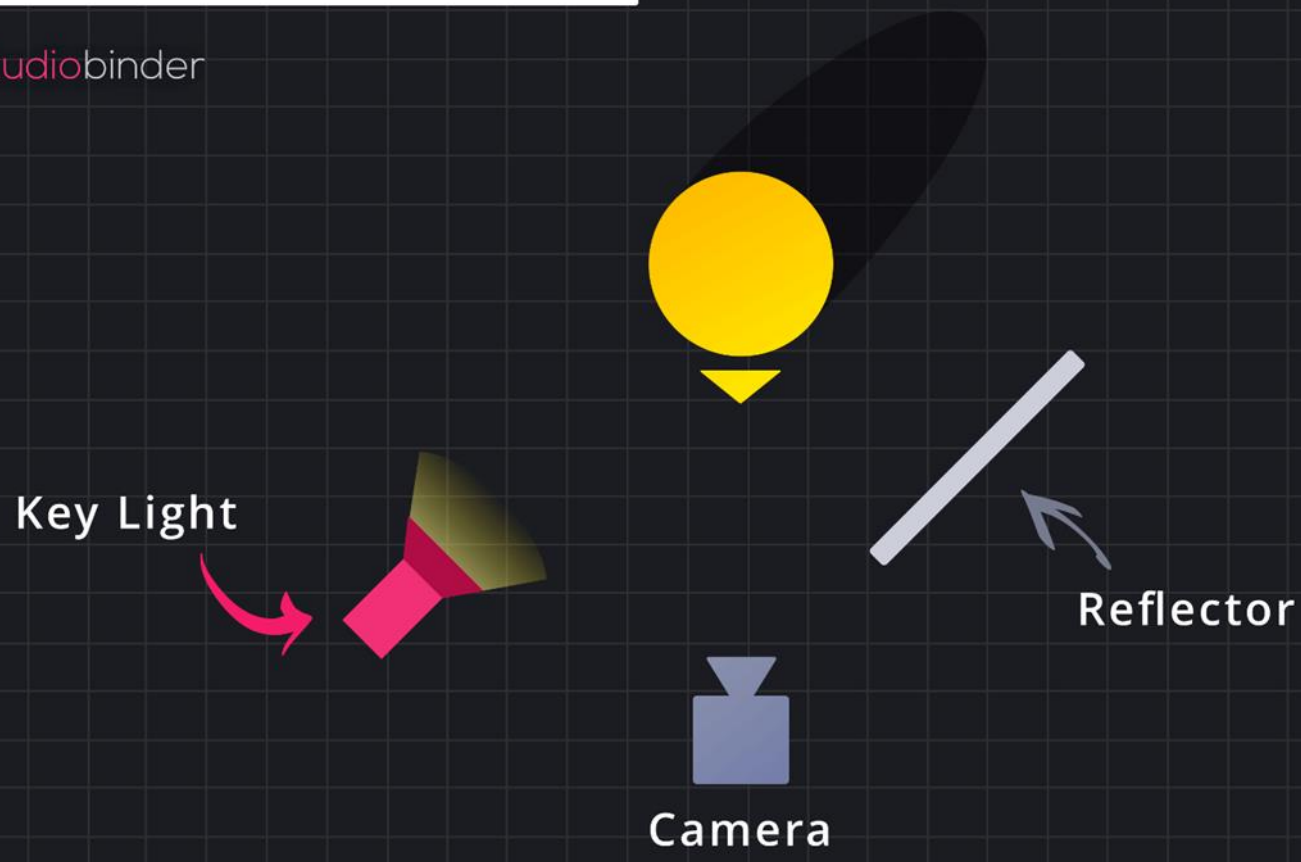


Oval Light

Oval Light or Rembrandt lighting is a popular lighting technique named after the famous 17th-century Dutch painter Rembrandt, who often used this lighting style in his portraits. It is characterized by a distinct triangular patch of light on the subject's cheek, just beneath the eye, on the shadowed side of the face.
This lighting style is often used to convey a sense of drama, mystery, or intensity. It's ideal for creating a moody and artistic effect, making it a favorite in portrait photography and cinematic scenes.

Rembrandt Lighting

studiobinder



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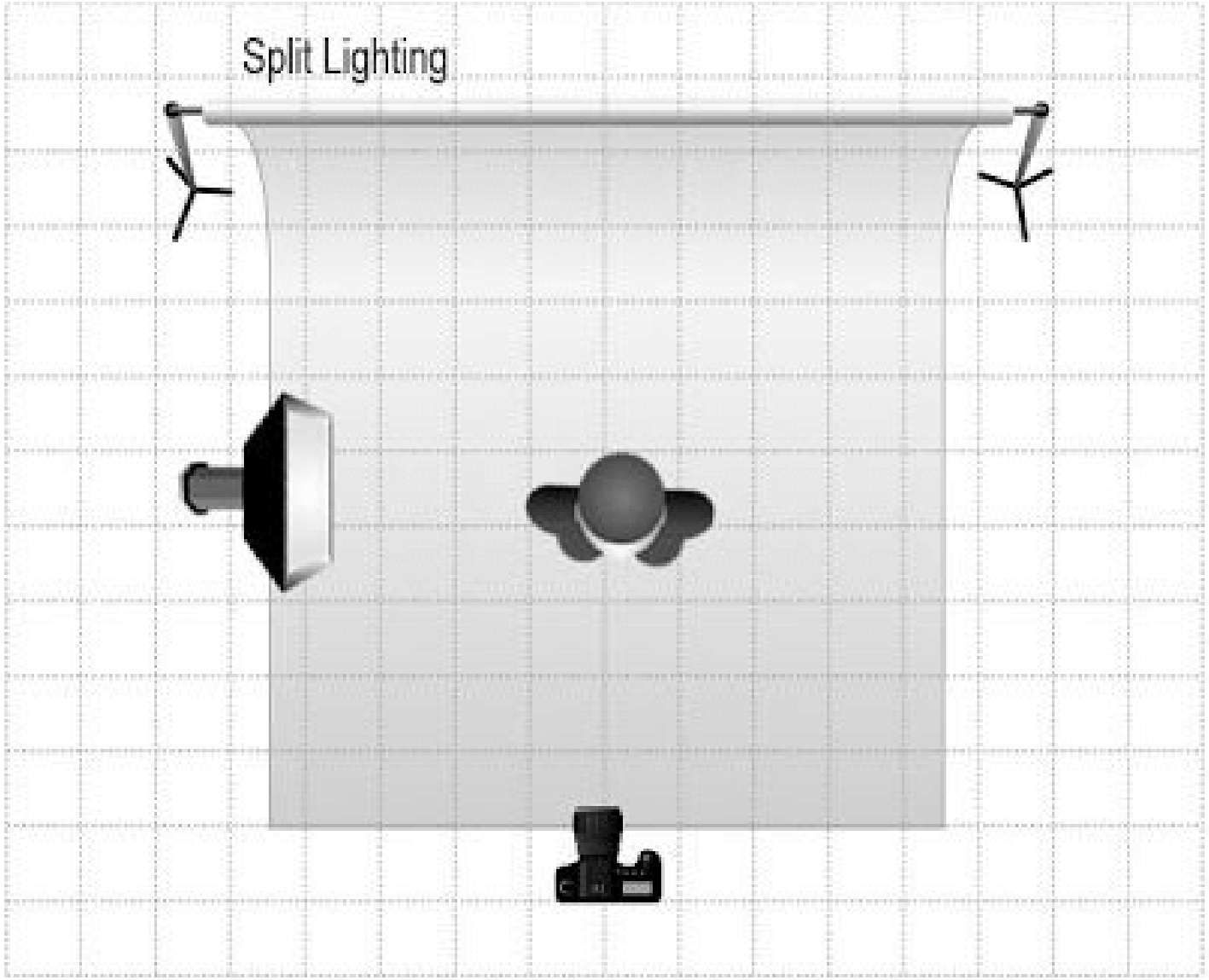
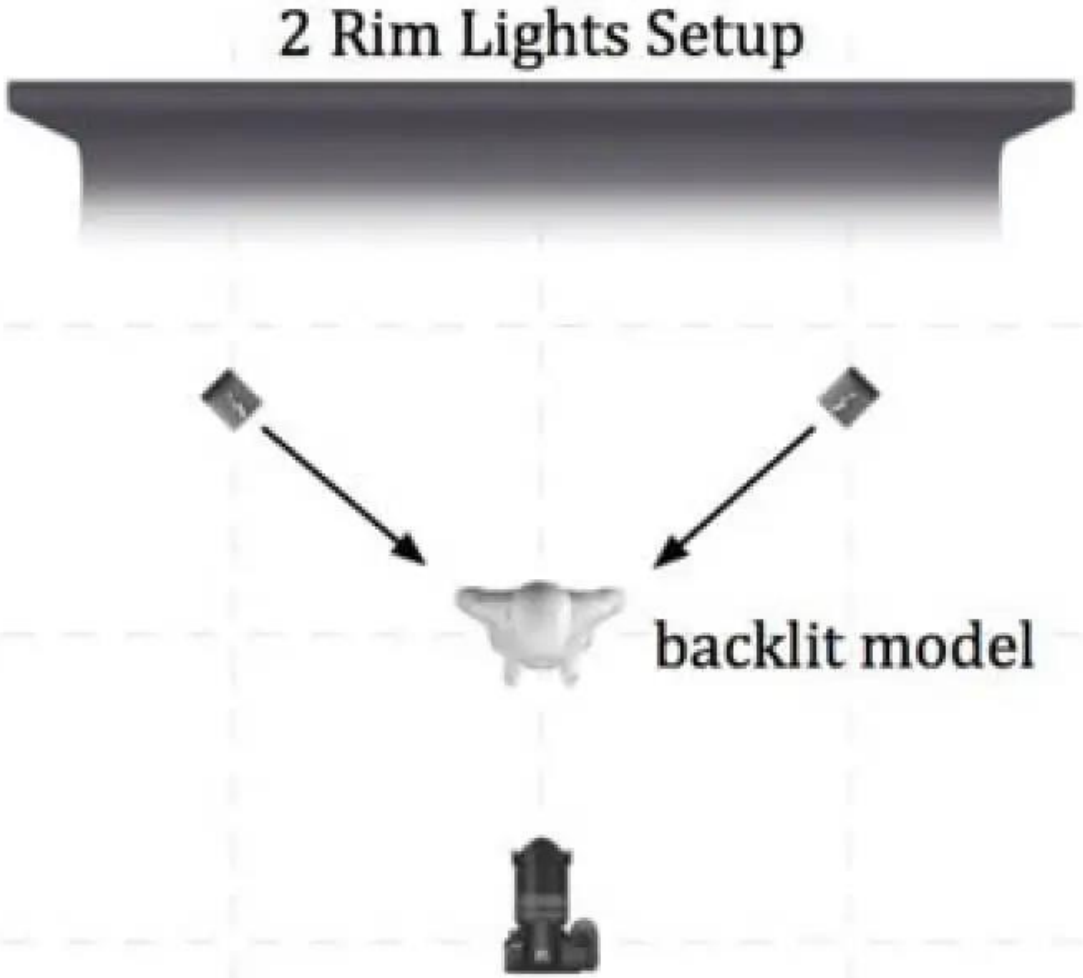
Side Light

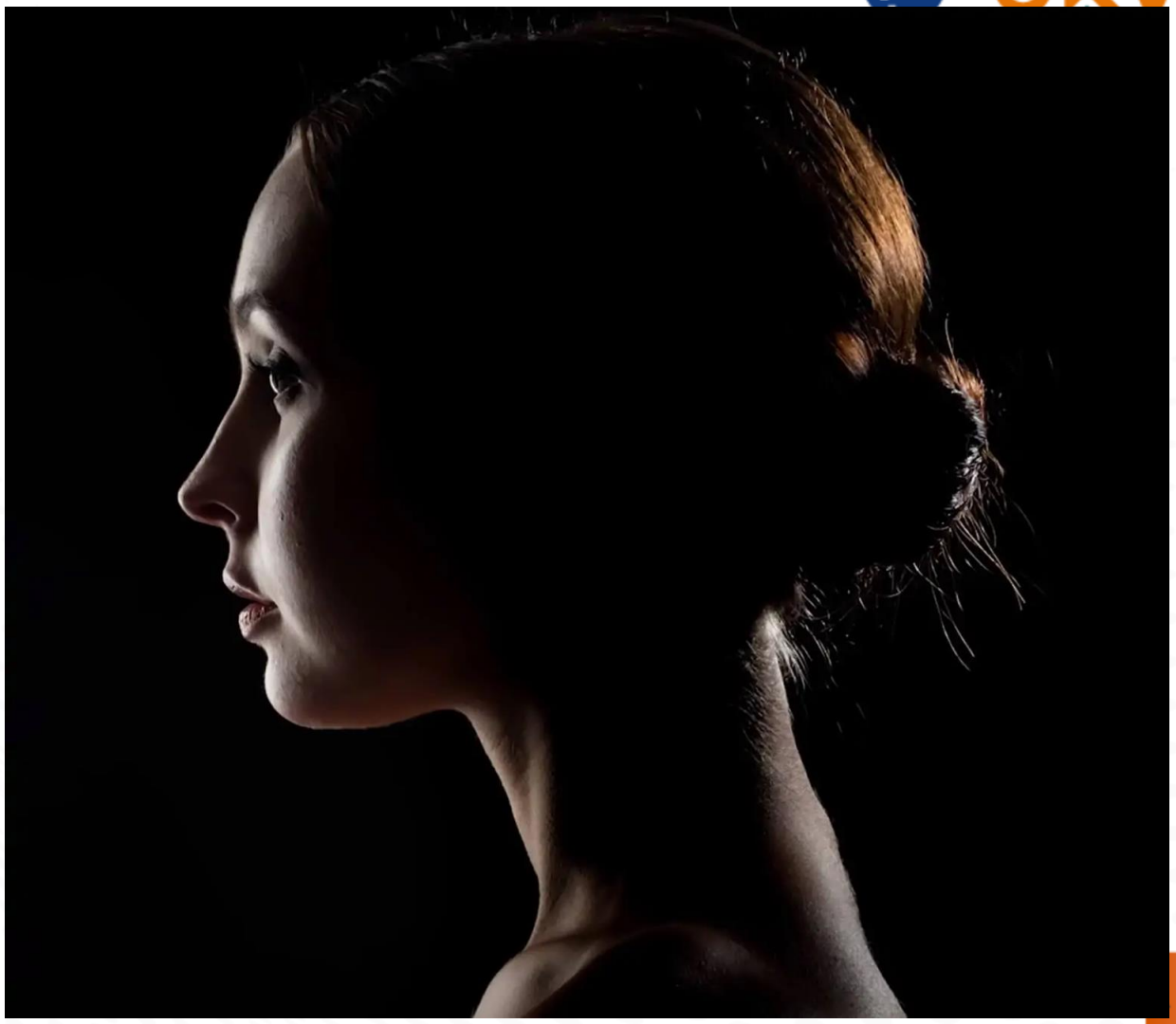
Side lighting is a technique in photography where the light source is positioned to the side of the subject, typically at a 90-degree angle. This lighting setup creates strong contrasts between the illuminated and shadowed areas, adding depth, dimension, and texture to the subject.

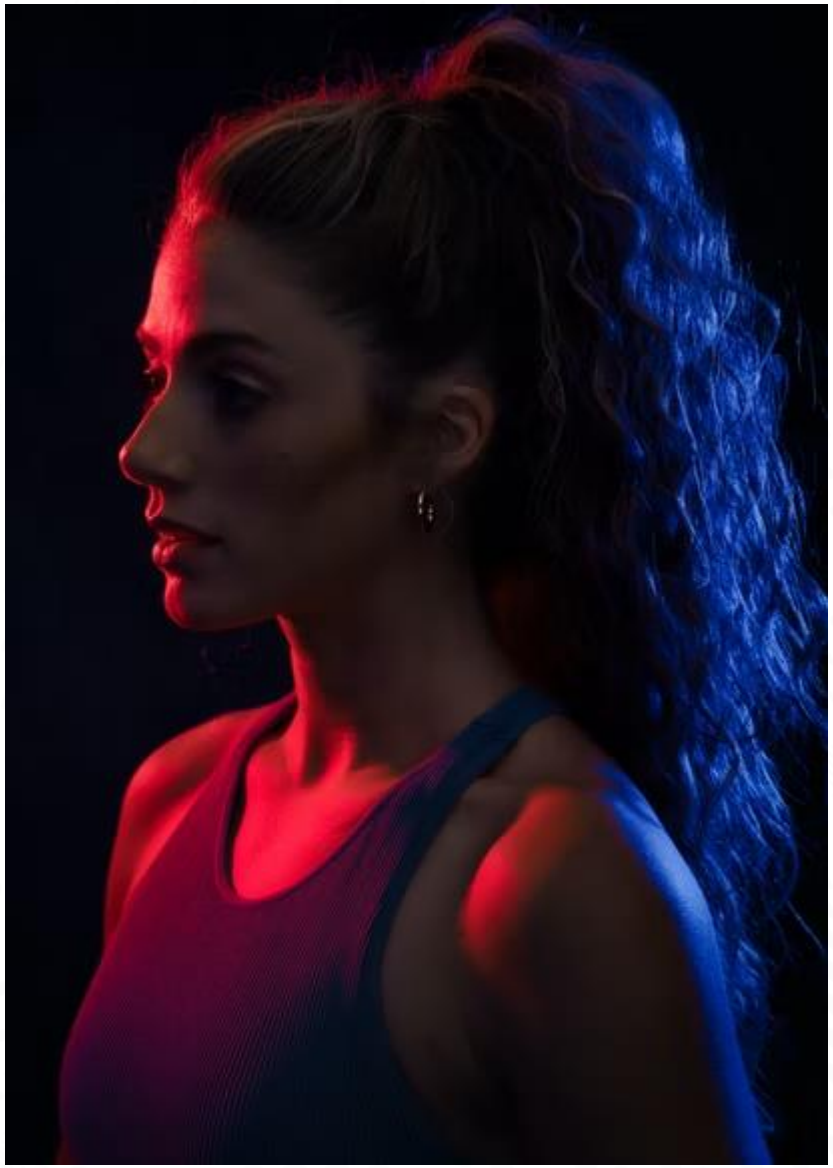


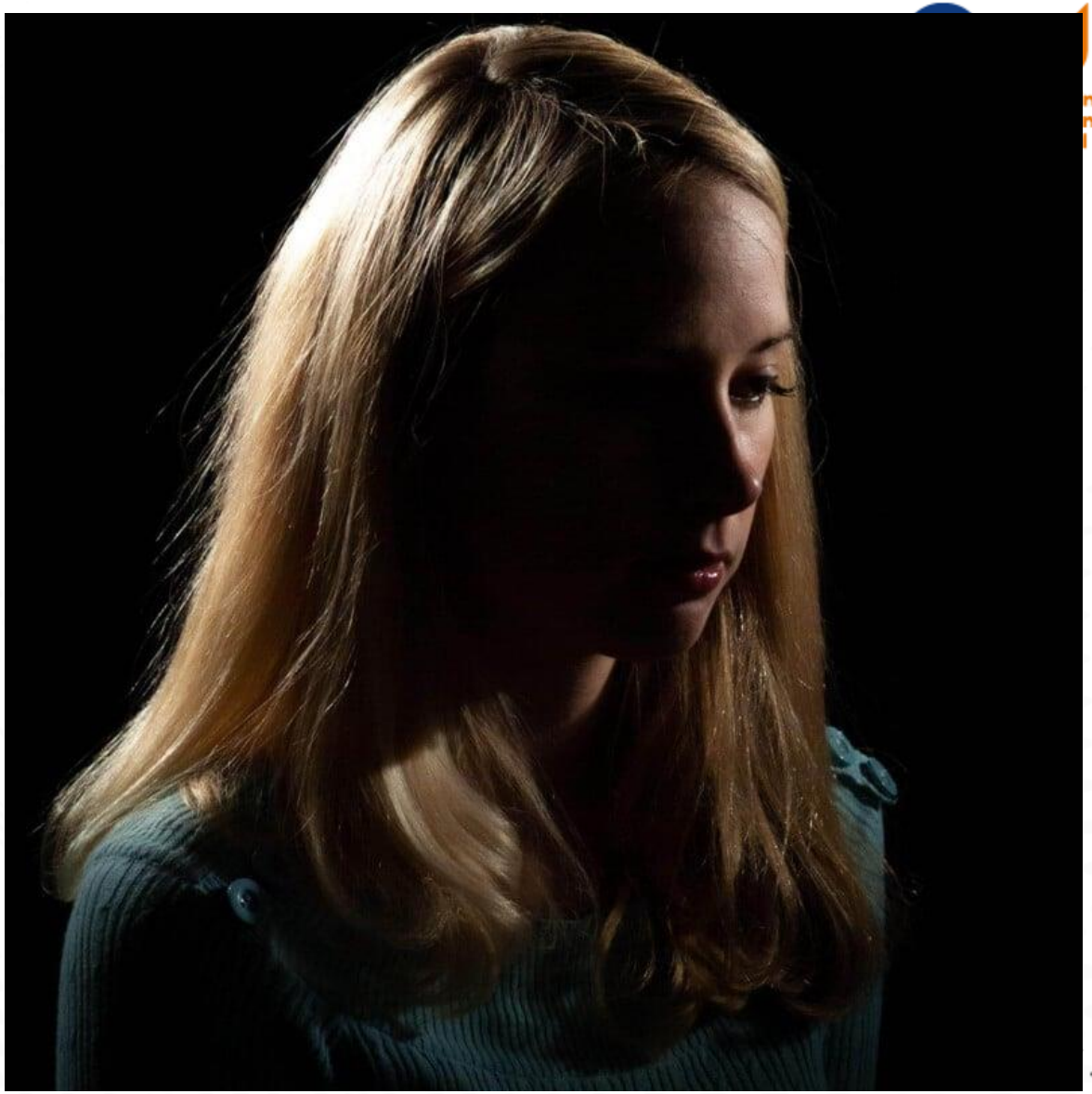
Rim Light

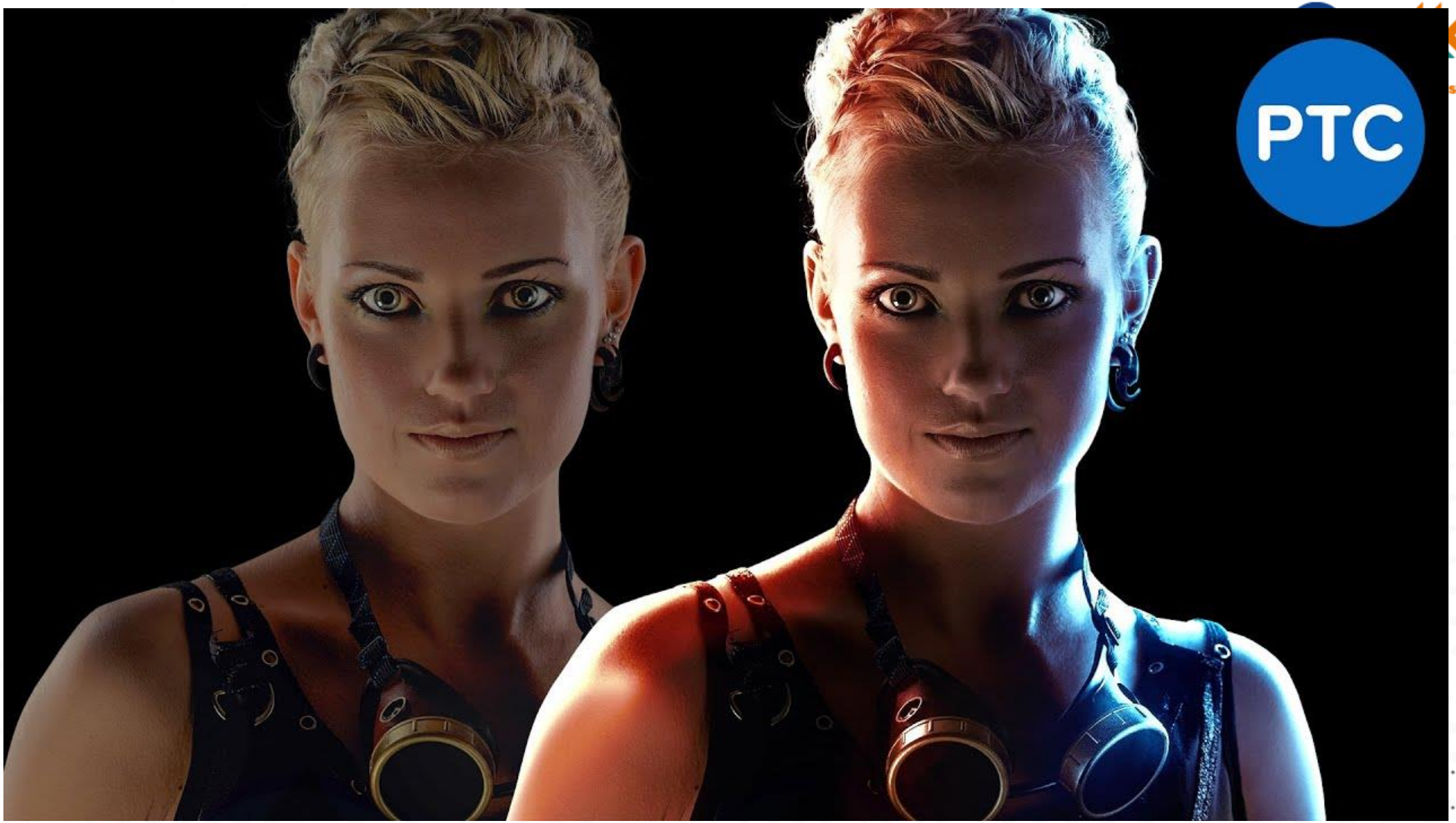
Rim lighting is a technique where the light source is positioned behind the subject, creating a glowing outline or "rim" of light around the edges. This technique is particularly effective for separating the subject from the background and adding a dramatic, three-dimensional quality to the image.
Rim lighting can also highlight the texture and details of the subject's edges. The light skims the surface, picking up subtle details and adding a sense of depth and dimension. Rim lighting adds a dramatic and cinematic quality to the image. It is often used in portrait and fashion photography to create a striking, moody atmosphere.


2 Rim Lights Setup
backlit model



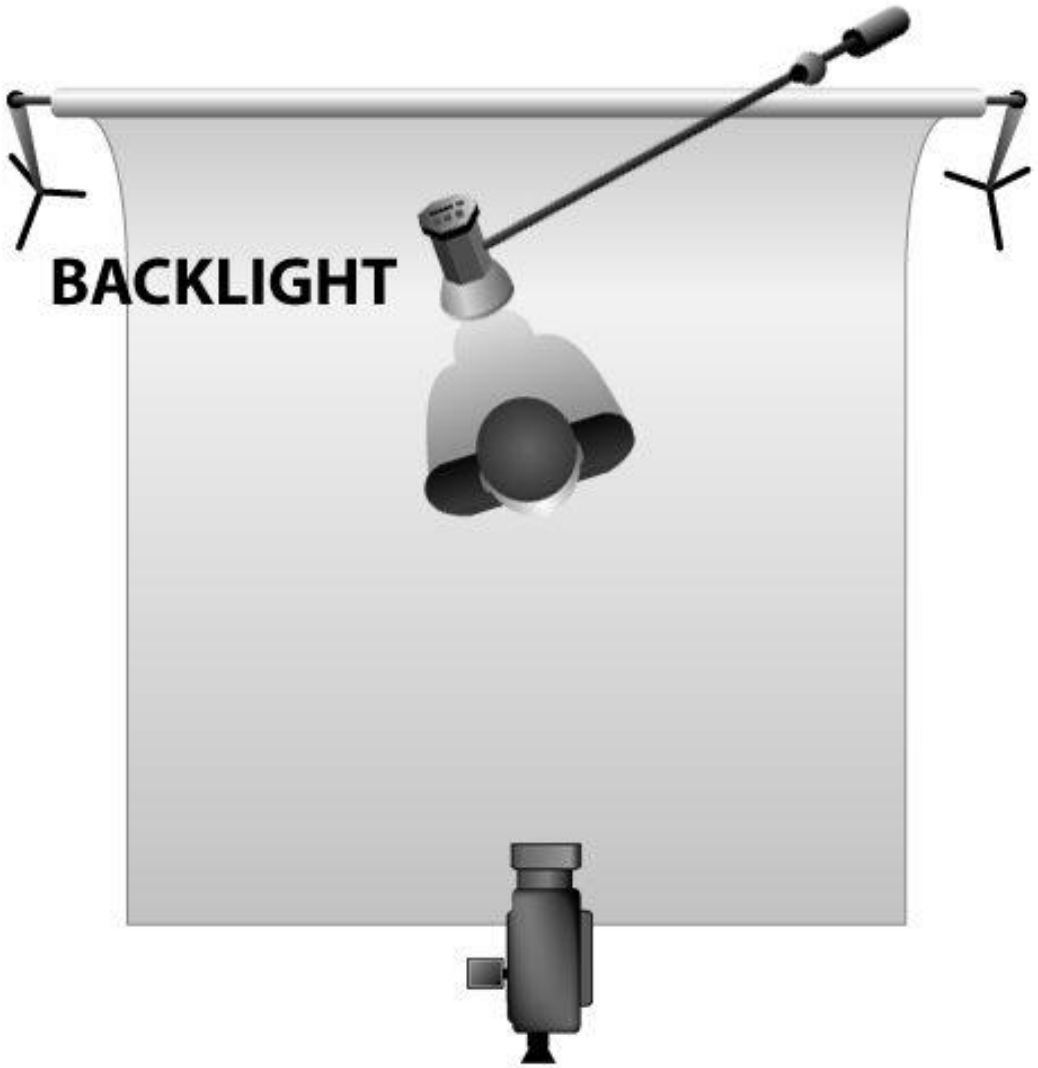


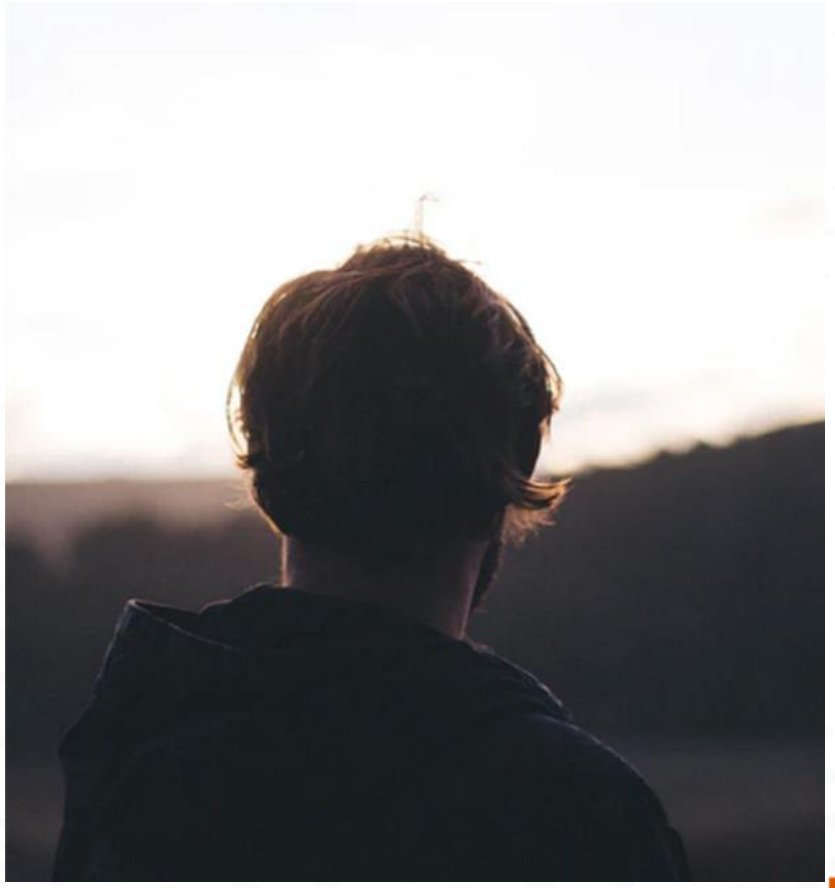




Back Light

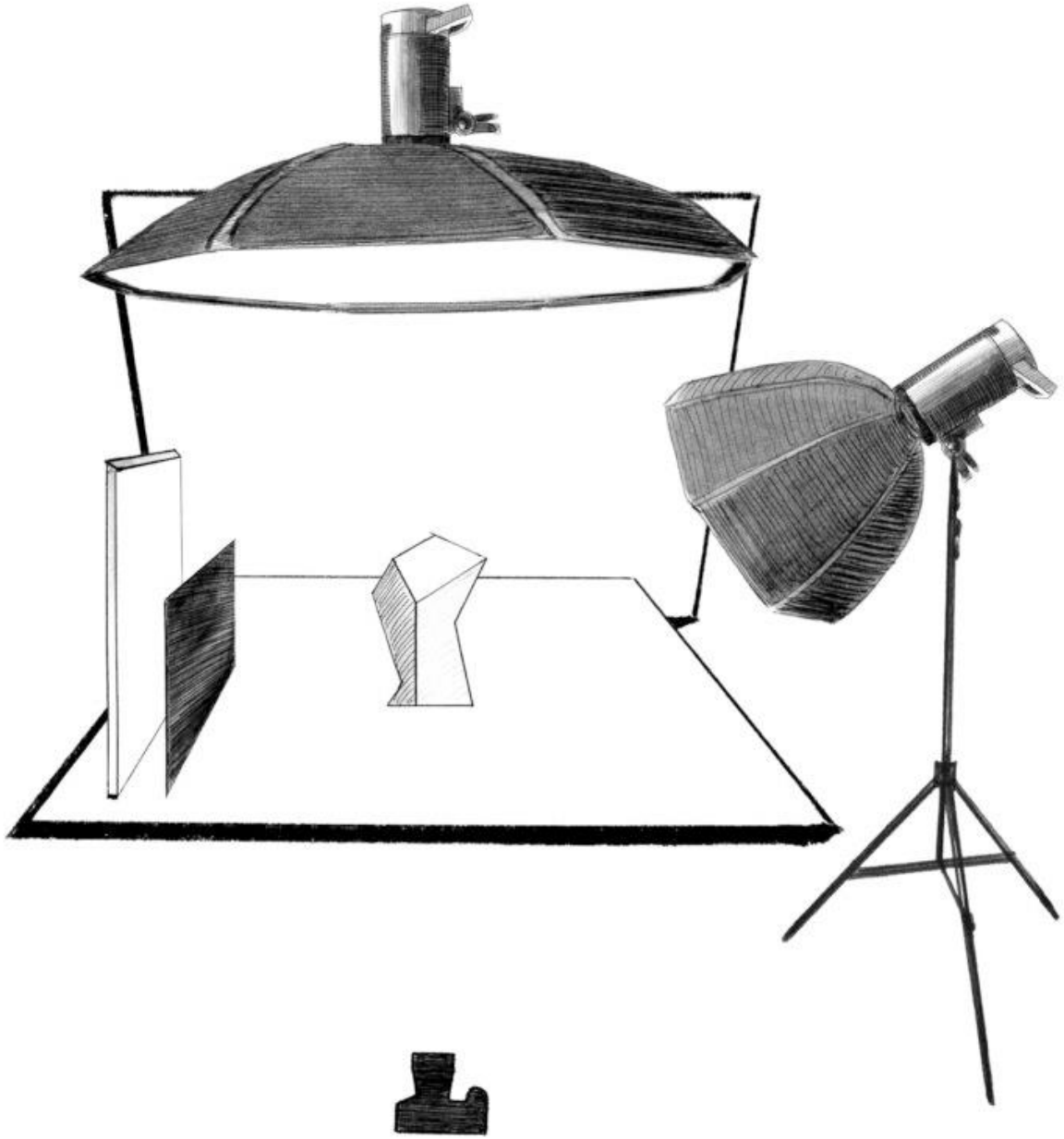
Backlighting is a technique in photography where the main light source is positioned behind the subject, facing the camera. This setup illuminates the subject from the back, creating a silhouette effect or a halo of light around the edges, which can add depth, dimension, and mood to the image.

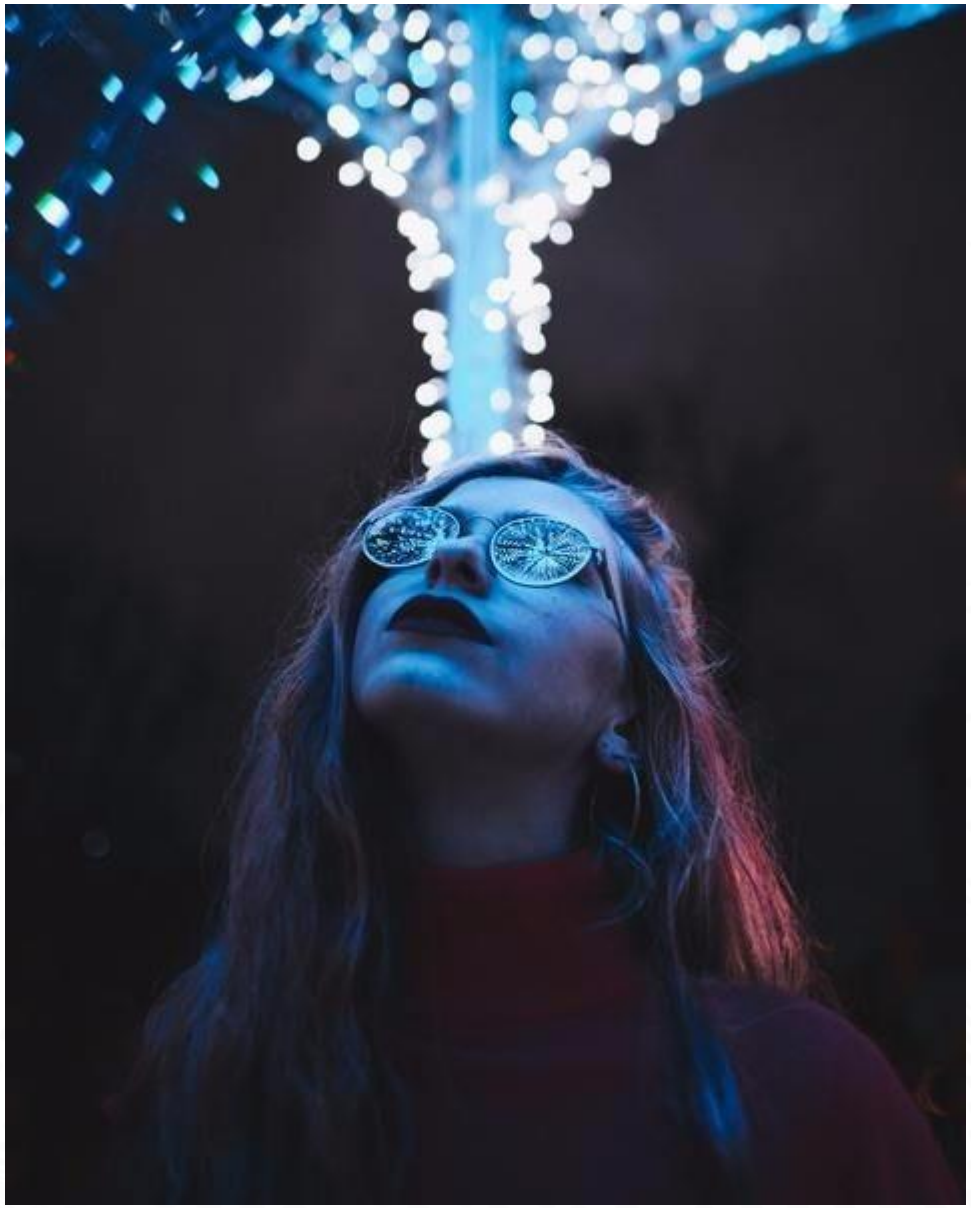


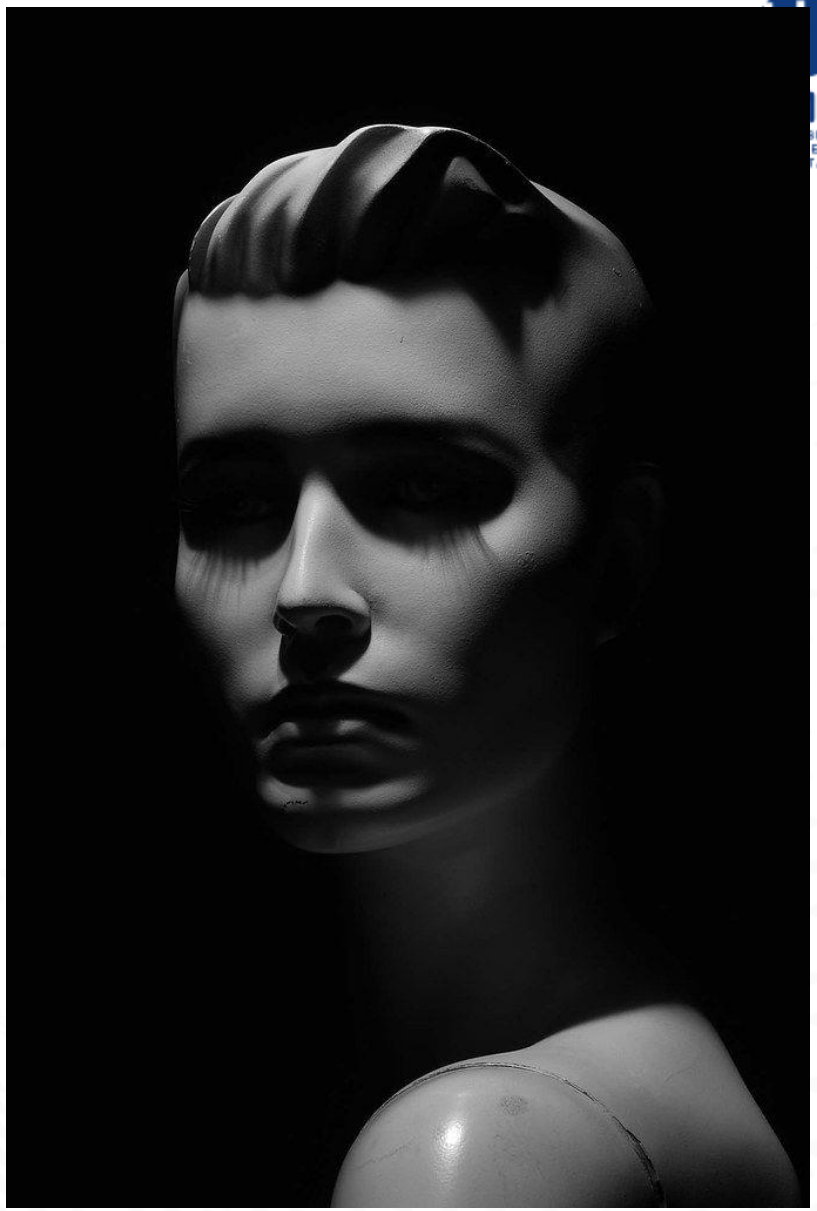


Top Light

Top lighting is a technique in photography where the main light source is positioned directly above the subject. This lighting setup casts shadows downward, emphasizing the top surfaces of the subject while creating strong shadows below. It is often used to create a dramatic and focused effect, highlighting specific features and adding depth to the image.







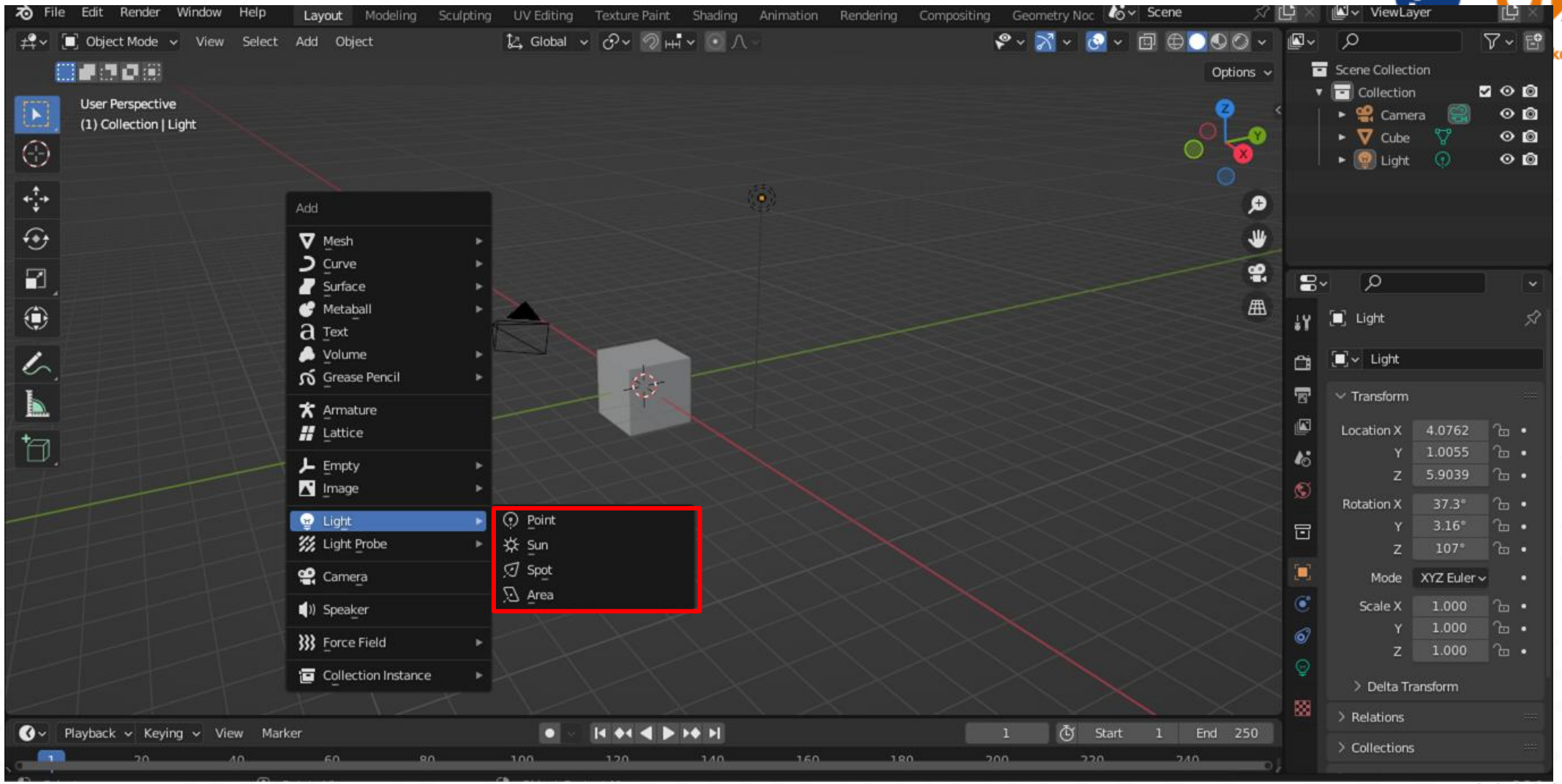
Week 12

Lighting in Blender

Lighting in Blender

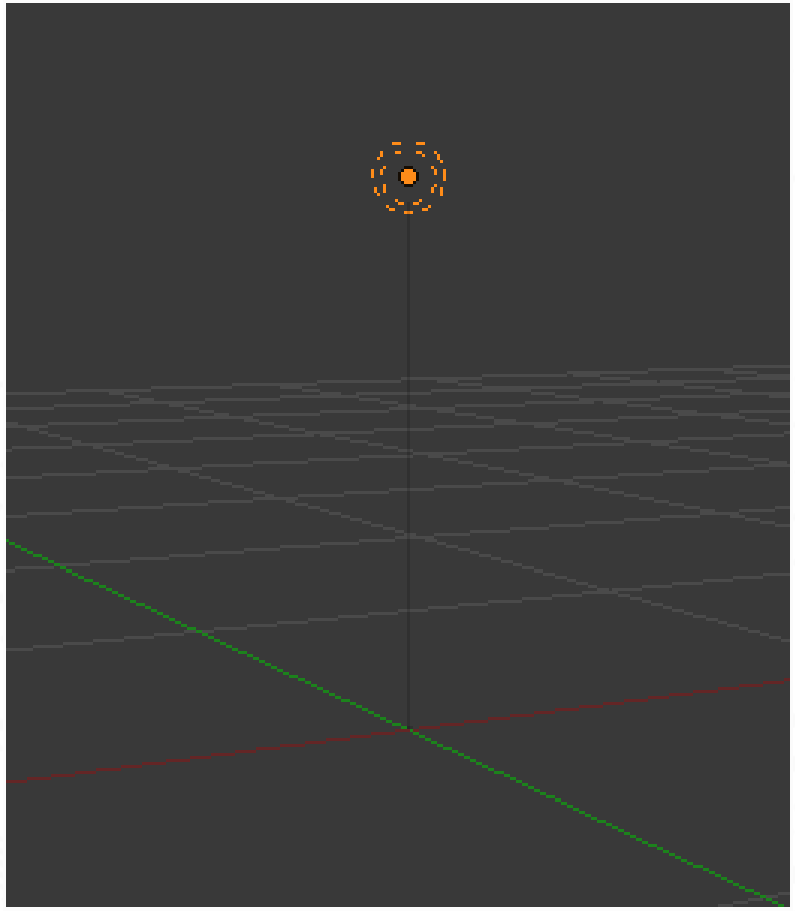
In Blender, several types of lighting options can be used to create various effects in your 3D scenes. Each type of light source serves different purposes and can be customized to achieve the desired illumination and mood. There 4 type of light source in blender:

1. Point
2. Sun
3. Spot
4. Area



Point

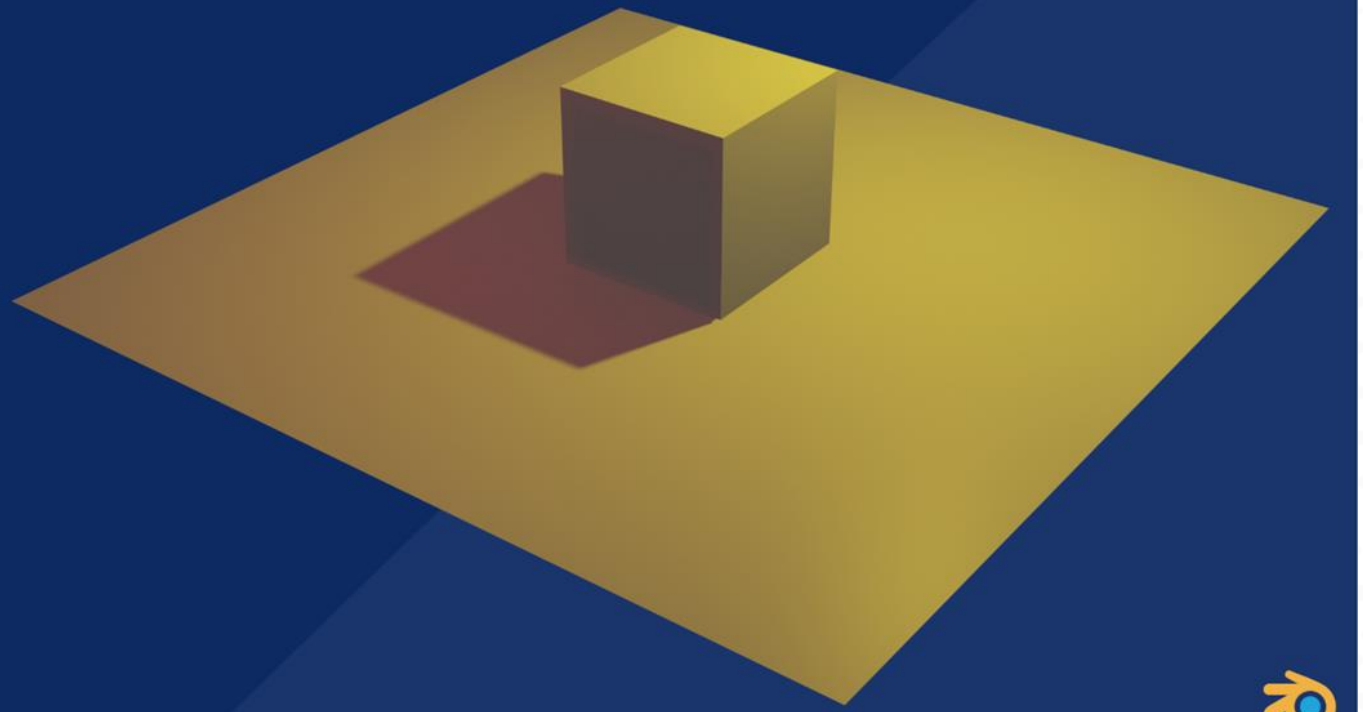
Point Light is one of the basic light types in Blender. It emits light uniformly in all directions from a single point, much like a bare light bulb. This type of light is versatile and can be used to illuminate scenes evenly, create ambient lighting, or simulate small light sources.



Lighting in Blender

Blender 2.82

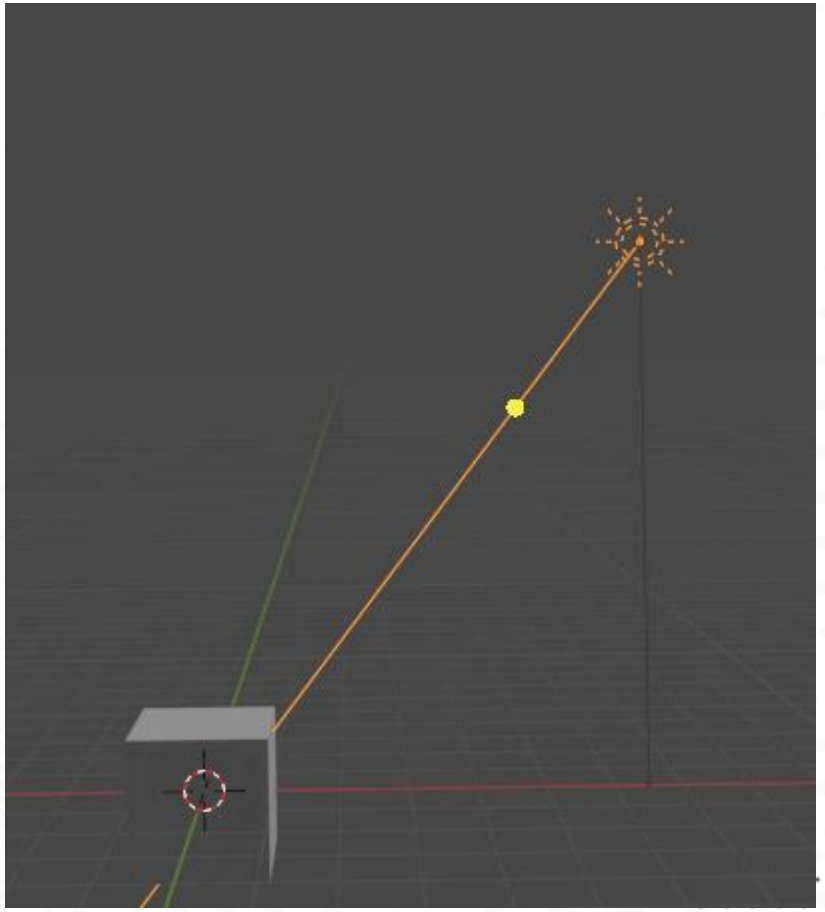
Level: Beginner

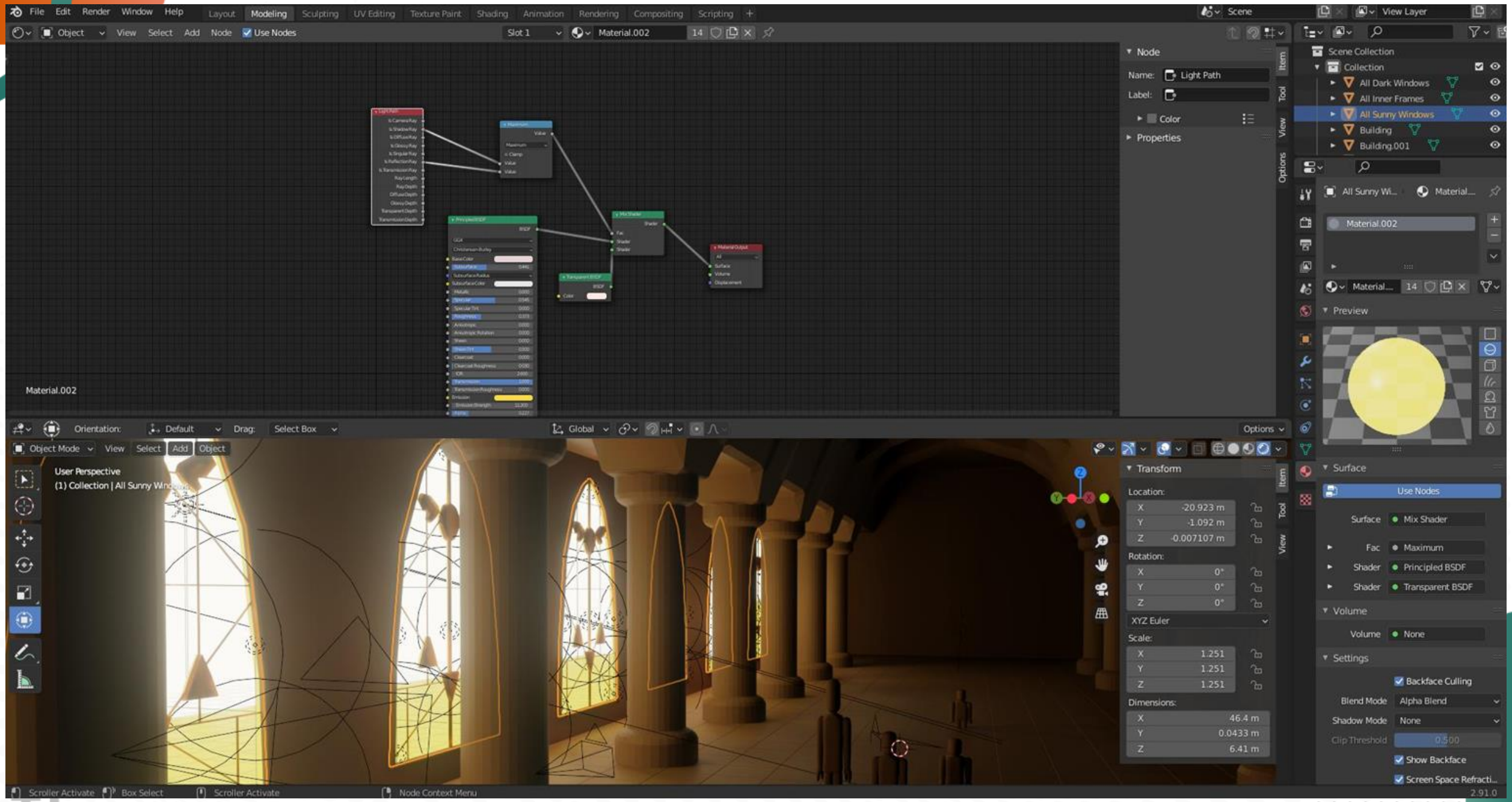


Point Light

Sun

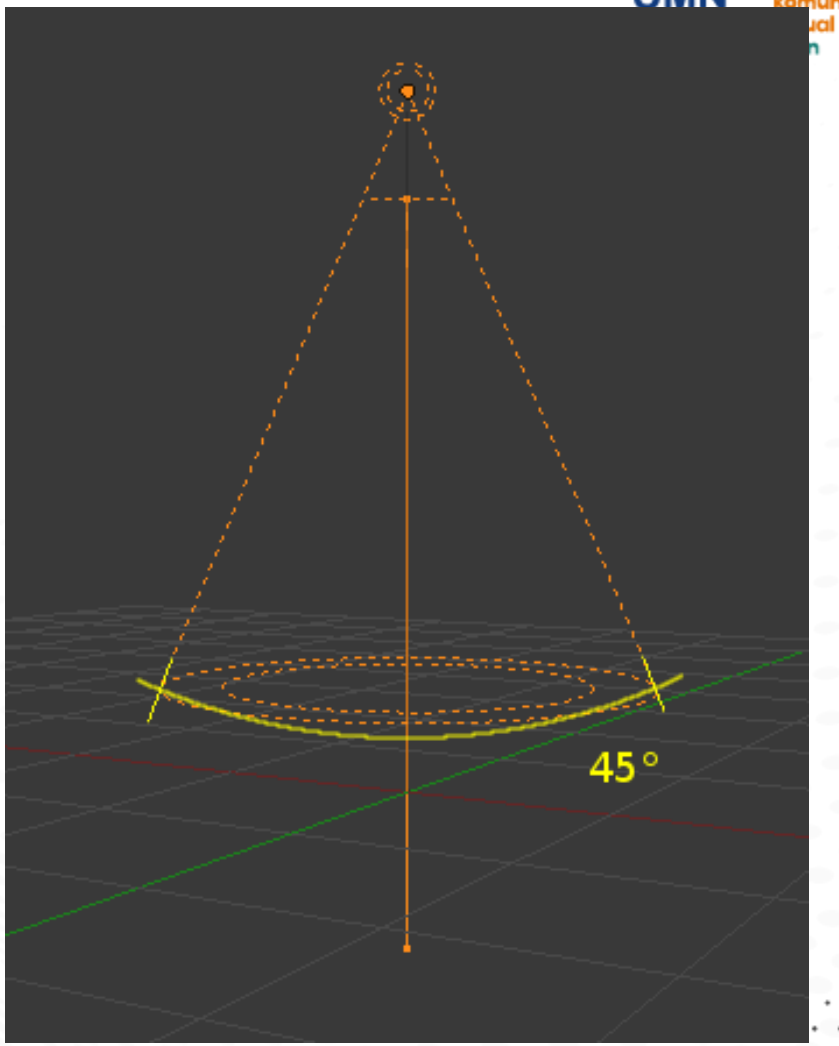
Sun Light is a powerful lighting type in Blender used to simulate natural sunlight. It provides parallel rays of light that uniformly illuminate the scene, which is especially useful for outdoor environments. Unlike other lights, the intensity of the Sun Light does not diminish over distance, making it ideal for large-scale scenes.

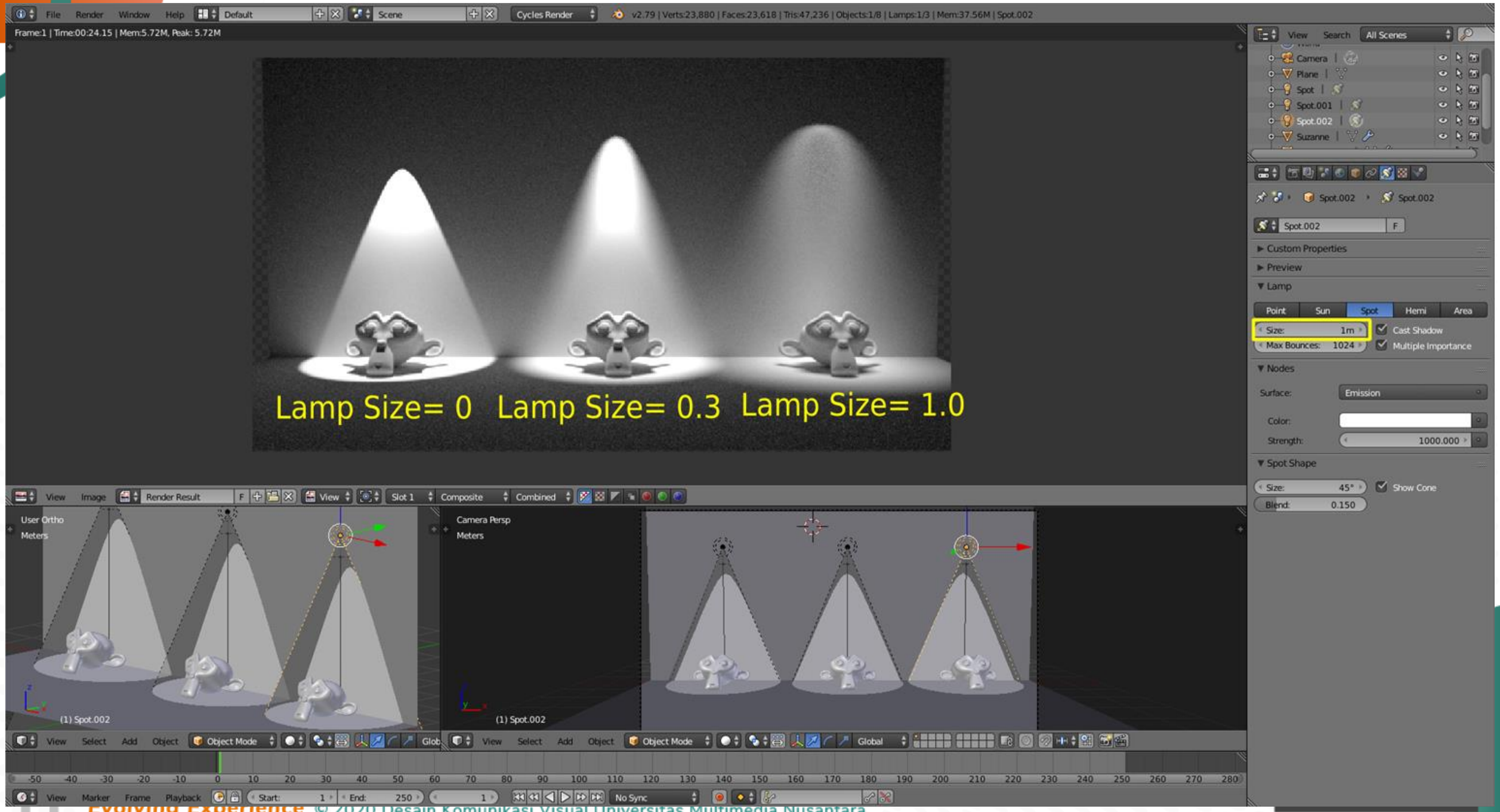




Spot

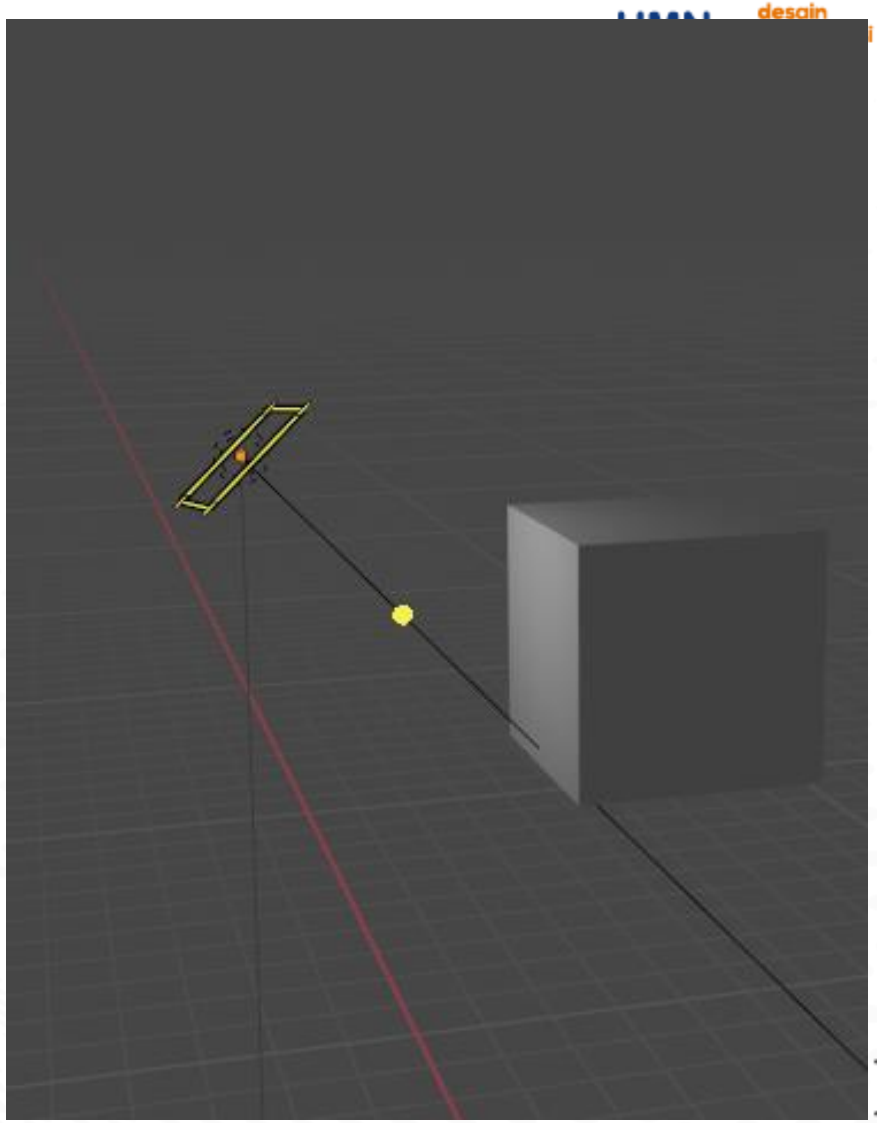
Spot Light in Blender is a versatile light source that emits light in a cone shape. It is similar to a flashlight or a stage spotlight, providing focused illumination on a specific area while creating defined shadows. Spot Lights are useful for highlighting particular elements in a scene, creating dramatic lighting effects, and simulating various real-world light sources.

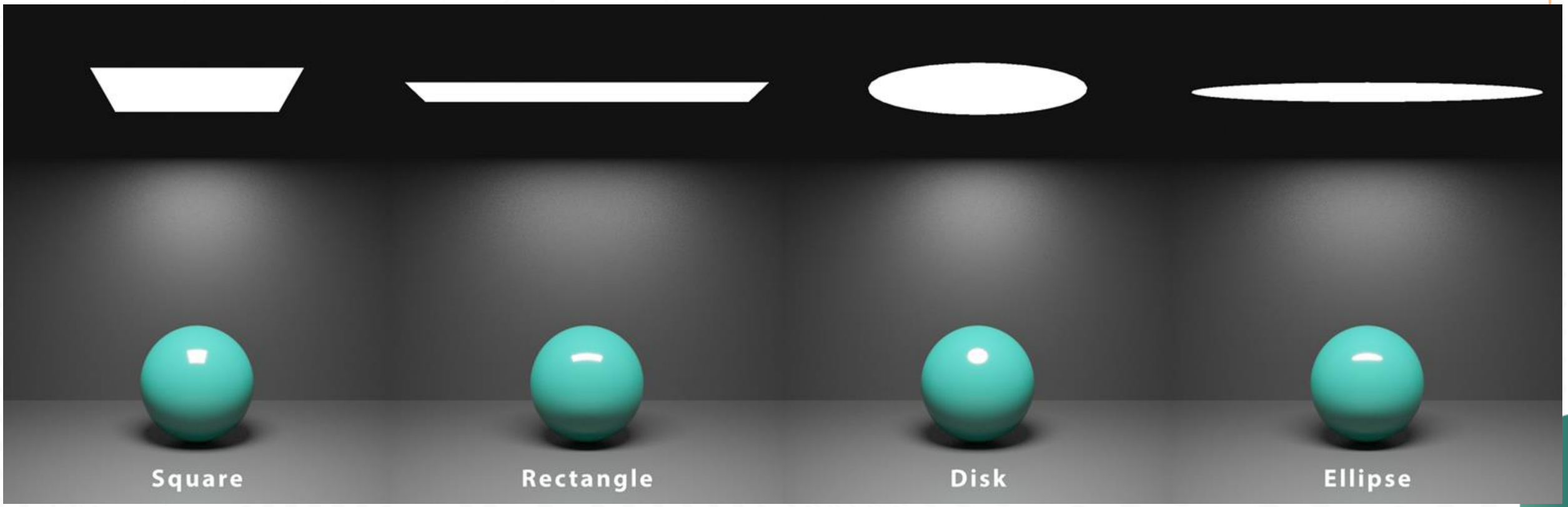




Area

Area Light is a versatile and realistic light source in Blender that emits light from a defined rectangular or square surface, creating soft, diffuse illumination. Unlike point or spot lights, area lights can simulate larger light sources such as windows, fluorescent lights, or softboxes, providing more natural and even lighting.



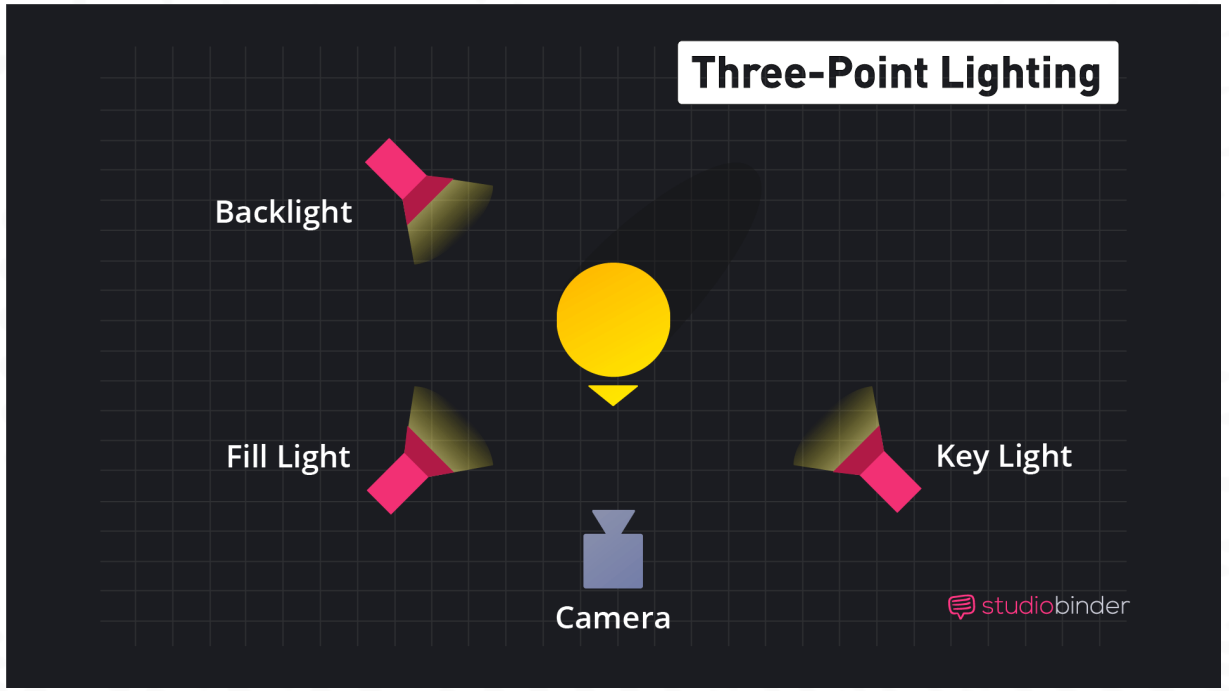


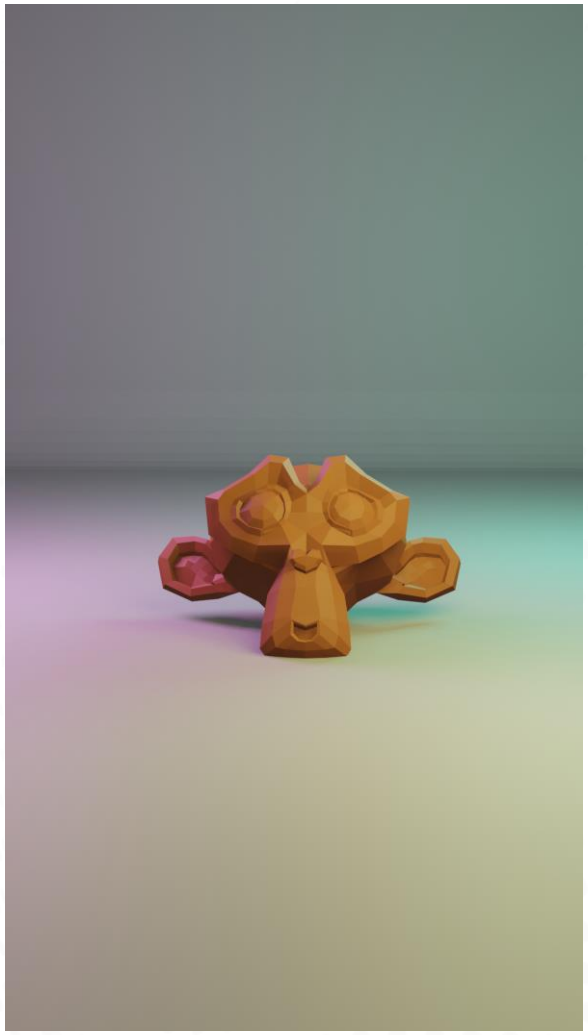
Week 12

Excercise

Lighting Excercise

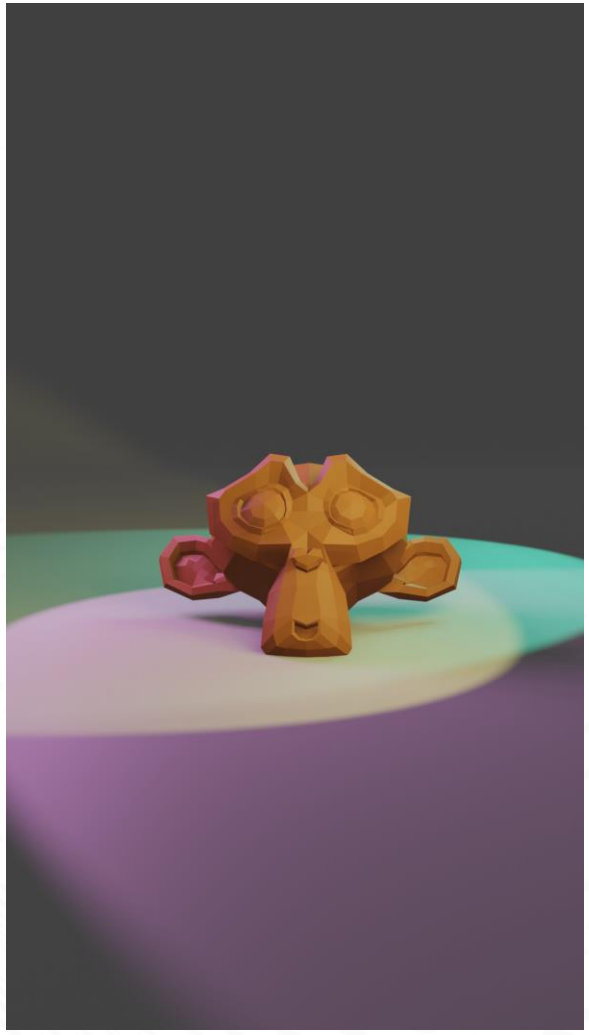
Using your previous model/sculpting exercise. Please create a render scene with 3 point lighting!





Point Light

Sun Light



Spot Light

Area Light