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Computer Graphics and Animations

ADOBE PHOTOSHOP 3

Smart Objects & Layers in Photoshop

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Image Cropping in Photoshop

- **Cropping:** removing unwanted or redundant parts of an image
- Purpose: adjusting image size for printing or composition
- The *Crop tool* provides handles for free or constrained cropping
- The ***Ratio*** option enables freeform cropping without size constraints
- Specific width and height cropping available via numerical input
- Preset aspect ratios and print sizes (4x5", 8.5x11" at 300 ppi)
- Important to reset crop preset to “Ratio” for free cropping
- ***Delete Cropped Pixels*** option: permanently removes cropped areas if enabled



Advanced Cropping Features

- ***Delete Cropped Pixels*** unchecked retains hidden image data
- ***Content Aware Fill*** extends image beyond original boundaries
- Useful for expanding canvas with automated background generation
- ***Content Aware Fill*** works best with moderate expansion: it may produce imperfect results depending on image complexity
- Overuse of ***Content Aware Fill*** can lead to unnatural image artifacts
- Generated fill quality varies; advanced methods covered later
- Saving cropped images after adjustments



Straightening Images

- Horizon lines can be tilted or uneven in photos
- **Straightening** aligns the horizon to be perfectly horizontal
- Using the *Crop Tool* and selecting the ***Straighten*** option
- Drawing a line along the horizon using the *Ruler Tool*
- Photoshop automatically rotates the image to straighten horizon
- *Content-Aware Fill* fills empty spaces after rotation
- Result: straight horizon with seamless image edges
- Useful for improving landscape and architectural photos



Introduction to Smart Objects in Photoshop

- New project for demonstration: 8 x 8 inches preset
- Importing an image via drag and drop
- The initial image larger than work area
- Scaling image down holding **Alt** (Windows) or **Option** (Mac) key
- Scaling reduces image quality in pixel-based software
- Zooming reveals loss of detail after resizing
- Pixel data destroyed after multiple resizes



Raster vs Smart Objects Layers

- **Raster layers:** direct pixel editing, lose quality when scaled
- **Smart Objects:** protected layers preserving original quality
- Converting raster layer to Smart Object via *right-click > Convert to Smart Object*
- Smart Object icon indicates conversion
- **Scaling** Smart Objects without quality loss
- Rasterizing layer: opposite of Smart Object conversion
- Comparison reveals quality difference between raster and Smart Object scaling



Editing Smart Objects

- Double-clicking the Smart Object thumbnail to open embedded file
- Editing content in a separate window (adding shapes, colors)
- Saving changes (**Ctrl/Cmd +S**) to update the main Photoshop document
- Smart Objects preserve image quality after editing
- Modifications reflected instantly in Smart Object layer
- Non-destructive editing preserves the original image
- Commonly used in graphic design for branding materials and mockups
- Smart Objects support multiple edits without quality loss



Using Vector Files as Smart Objects

- **Vector graphics** retain quality regardless of scaling
- Illustrator files can be copied and pasted into Photoshop
- Paste options include raster layer, smart object, pixel, or shape layer
- Choosing ***Paste as Smart Object*** preserves vector quality
- Smart Object allows scaling without pixelation
- Double-clicking Smart Object opens source file for editing
- Edits in Illustrator update automatically in Photoshop
- **Seamless workflow** between vector and raster programs



Introduction to Layer Styles in Photoshop

- **Layer styles:** apply visual effects to layers non-destructively
- **Bevel & Emboss:** create depth and highlights on layer edges
- **Stroke:** adds an outline around the layer content
- **Inner Glow:** produces a glow effect inside the layer boundaries
- **Gradient Overlay:** applies a gradual blend of colors over the layer
- **Drop Shadow:** adds realistic shadow effects behind the layer
- Useful for enhancing text, shapes, and images with customizable effects



Getting Started with Layer Styles

- **Layer styles:** versatile effects that improve layer visuals
- Creating a new project with 8x8 presets
- Adding text to experiment with effects
- Layer Styles - effects applied to layers
- Enhance appearance without altering original content
- First focus: **Bevel & Emboss** effect
- Multiple ways to open Layer Styles dialog help speed workflow :
 - *Right-click layer > Blending Options*
 - *Double-click layer area (not name or thumbnail)*
 - *Right-click Effects > Blending Options*



Applying Bevel & Emboss

- **Bevel & Emboss** create a 3D effect on layers
- The effects **simulate depth** by controlling highlights and shadows, adding dimensionality
- Adjusting Style, Technique, Depth, Direction, Size, Softness
- Angle and Altitude control the light source direction
- Gloss Contour modifies highlight shapes
- Highlight Mode and Shadow Mode blend highlights and shadows
- Settings can be saved as defaults for consistency
- Real-time preview helps fine-tune the effect



Detailed Settings of Bevel & Emboss

- Depth slider sharpens or softens the 3D effect
- Direction chooses embossing up or down
- Size changes the extent of bevel edges
- Softness smooths edges for subtle effects
- Gloss Contour curve can be customized like Photoshop curves
- Presets available: linear, cone, cone inverted, etc.
- Highlight and shadow colors and blend modes adjustable
- Opacity controls the intensity of highlights and shadows
- Customizing these parameters tailors the 3D look to suit design needs



Using & Copying Layer Styles

- Bevel & Emboss can be applied to shapes and text
- Copy layer style: *right-click layer > Copy Layer Style*
- Paste layer style on compatible layers (not text)
- Text layers require manual addition of effects
- Text bevel can be adjusted separately for size and depth
- Avoid textures for a clean bevel effect on a project
- Layer styles speed up repetitive effects; copying works mainly on shapes, manual tweaks needed for text



Exploring the Stroke Layer Style

- **Stroke** adds an outline effect to layers, customizable in size and position
- Duplicating layers easily by holding **Alt/Option** and dragging with **Shift** for straight movement
- Stroke position options: **Inside**, **Outside**, or **Center** of the shape/text
- Stroke size adjusts thickness; changing position affects how the stroke looks around the object
- Stroke color and fill types can be customized – options include **Solid Color**, **Gradient**, or **Pattern** fills
- Gradient strokes allow multiple colors with adjustable blending, angle, and opacity



Advanced Stroke Features

- Adding **multiple strokes** on one layer for layered border effects
- Each stroke can have its own size, color, and fill type (solid, gradient, or pattern)
- Strokes stack in order: top strokes appear above lower ones
- Gradients in strokes can be customized with presets, colors, opacity, and angle
- Using **Alt/Option + drag** on effects to quickly copy layer styles between layers
- Stroke position (inside, outside, center) changes how it surrounds the shape
- Stroke blending modes affect how the stroke interacts with the layer below
- Saving favorite stroke settings as defaults for faster workflow



Inner Glow Layer Style Basics

- Duplicating shape layer and repositioning for demonstration
- Applying **Inner Glow** via *Layer Styles*
- Increasing opacity (80%) to reveal the glow
- Adjusting size for glow visibility inside the shape
- Glow effect applied to inside edges
- Changing blending mode (Lighten, Screen, Normal)
- Adding noise for a grainy texture
- Modifying color to tint the glow
- Using size and choke for glow spread and thickness



Advanced Inner & Outer Glow

- Method options: **Linear & Precise** for falloff effects
- Contours to shape glow, like bevel controls
- Inner Glow on inside edges; Outer Glow on outside edges
- Outer Glow visible with a dark background layer
- Outer Glow settings similar: size, opacity, color, blend modes
- Combining inner and outer glows for depth
- Experimentation recommended for unique effects
- Simple, versatile styles for enhancing design elements



Gradient Overlay

- **Gradient Overlay** applies a smooth color transition effect over the entire layer
- Replaces the original colors or patterns with the selected gradient
- Allows selection and customization of preset gradients for variety
- Scale adjusts how sharply or smoothly colors blend within the gradient
- Angle rotation controls the direction the gradient flows across the layer
- Opacity controls how much the gradient shows through versus the base layer
- Option to reverse the gradient's color order for different effects
- Aligning the gradient to the layer changes its position relative to content



Gradient Overlay Styles & Color Overlay

- Multiple blending methods (Classic, Perpetual) affect gradient behavior
- Different **gradient styles** include Linear (straight), Radial (circular), Angle, Reflected, and Diamond
- Each style creates unique color transitions suitable for different designs
- The **Color Overlay** effect fully replaces the layer's color with a single chosen color
- Combining Color Overlay with Gradient Overlay allows creative layering effects
- Adding multiple gradient overlays on one layer and blending them together
- Adjusting these settings helps create depth and dimension in graphics
- Experimenting with these options builds understanding and creative control

Applying Drop Shadow

- Selecting the target layer (logo)
- Duplicating the layer using **Alt/Option + Shift + drag** for aligned placement
- Opening **Layer Styles** and enabling the **Drop Shadow** effect
- Shadow properties include **Blending Mode**, **Color**, **Opacity**, and **Angle**
- Adjusting the **Angle** affects other effects like Bevel & Emboss
- Using **Distance** to offset shadow from the layer object
- **Spread** expands the coverage area of the shadow
- **Size** softens the shadow edges for a natural look



Drop Shadow Customization Features

- Modifying **Contour** for creative shadow shapes and light behavior
- Adding **multiple drop shadows** for layered depth and complex effects
- Using **Noise** to add subtle texture to the shadow
- Drop shadows stack visually and can vary in distance, size, and opacity
- **Edit Contour Maps** for each shadow to shape transitions
- Shadows can have their own colors, directions, and intensities
- This flexibility helps create dynamic and engaging visuals
- Drop shadow layering is great for stylized or professional effects



Separating Shadows into Editable Layers

- Right-clicking the effect and choosing **Create Layers** to separate styles
- Photoshop converts effects like shadows into editable layers
- Separated shadows appear below the main object as new layers
- Full control to **transform, scale, or distort** shadows freely
- Ideal for **realistic lighting**, where default shadows fall short
- Allows manual adjustment of shadow position and shape (cast on ground)
- Shadow transformation requires tools like **Distort**, which will be covered later
- Enables more natural and physically accurate shadow effects



Exercise 1

- Create a new file without artboards - Gold Bar effect
- Draw a rectangle that will serve as the base of the gold bar
- Fill the shape with a gold-like color (somewhere between yellow and brown)
- Apply a **Bevel & Emboss** layer style to simulate 3D depth
- Set the style to **Inner Bevel** and the technique to **Chisel Hard** for sharp edges
- Adjust **Depth** to define the sharpness of edges; increase **Size** for thickness
- Set **Softness** to 0 for a crisper result; try various **Angle** and **Altitude** settings
- Experiment with **Gloss Contour** and **Opacity** to give the surface a metallic shine



Exercise 1

- Add a **text layer** and type a name or any text ("ASSKM").
- Sample the background gold color and make the text slightly brighter
- Apply **Bevel & Emboss** to the text to create an inscribed, engraved effect
- Change **Technique** to Smooth, and reduce **Depth** to 1-2 for subtle carving
- Increase **Size** to control how deep the inscription appears visually
- Lower **Highlight Opacity** to make the text blend more realistically into the gold
- Try different **Contour** styles for varied surface effects on the inscription
- Duplicate the text layer and tweak settings for more realistic variations



Exercise 2

- Open the **poster design** from the previous lecture
- Save a **duplicate** of the design (“Poster 2”) to work non-destructively
- Apply a **Stroke** layer style to the text
- Set the **stroke position** to *Outside* and reduce the **size**
- Use a **gradient stroke** for a more dynamic look - blend two shades of blue
- Adjust **scale** and **opacity** for the gradient stroke to enhance subtlety
- Click OK when satisfied to apply the style and improve visual impact



Exercise 2

- Add a **Drop Shadow** to key text elements for subtle depth and emphasis
- Use mouse wheel to zoom in and adjust **Opacity**, **Distance**, and **Size**
- Apply **Bevel & Emboss** to headline text - keep **Size** low and **Softness** high for subtle effect
- Experiment with **Contour** presets to refine the embossed look
- Add a **Gradient Overlay** to the logo, blending light and dark blue for contrast
- Copy the layer style from one logo/text and paste it onto others to keep the style consistent
- Save file when done to preserve styled version



Questions & Answers Homework

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