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the European Union

Computer Graphics and Animations

ADOBE PHOTOSHOP 4

Blending Modes; Selection Tools;
Masking in Photoshop

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Introduction to Blending Modes

- **Blending modes** define how two or more layers visually interact
- Applicable to all layer types, including images, shapes, and text
- Organized into categories: Normal, Darken, Lighten, Contrast, Comparative, and Composite
- **Darken group** includes Multiply and Color Burn; used to deepen tones
- **Lighten group** includes Screen and Color Dodge; used to brighten images
- **Contrast group** (Overlay, Soft Light) combines darkening and lightening effects
- **Comparative group** (Difference, Subtract) creates unique distortions
- **Composite group** (Hue, Saturation, Color, Luminosity) affect color characteristics directly



Exercise 1

- Open two images: one with a man's eyes and one with a lens flare
- Drag the lens flare image onto the man's eyes image to combine them
- Resize and position the lens flare over the eye area as needed
- Apply a blending mode from the **Lighten** group (Screen)
- Blending removes the black background, preserving only the flare
- Duplicate the flare layer (**Ctrl/Command + J**) to enhance the lighting effect
- Adjust rotation and scale of duplicates to improve visual impact
- Save the final composition for future reference



Exercise 2

- Open the provided shoes and logo image
- Objective: Remove the white background from the logo using blending modes
- Avoid manual background removal or selection techniques
- Select the logo layer in the Photoshop workspace
- Apply a blending mode from the **Darken** category (Multiply)
- White background is instantly removed with one click
- Logo remains clean and overlays seamlessly on the shoe image
- Save the project after applying the blending mode



Exercise 3

- Open the light bulb image and two lens flare images
- Drag and drop both lens flares into the light bulb file
- Position and scale the flares to align with the bulb's center
- Apply blending modes such as **Screen** or **Color Dodge**
- Use **Linear Dodge** for stronger glow effects (optional)
- Reduce opacity on flare layers to maintain visual balance
- Combine multiple flares to simulate realistic bulb lighting
- Save the final glowing bulb composition for future use



Exercise 4

- Open the Woman and Foggy Mountain images
- Drag the Foggy Mountain image into the Woman file
- Resize and position the mountain image to fit the frame
- Apply blending modes to combine the images
- Experiment with **Hard Light**, **Screen**, and **Color Dodge** modes
- Select Screen blending mode for the desired effect
- Duplicate the blended layer (**Ctrl/Command + G**) and adjust opacity
- Achieve subtle blend effects with simple adjustments



Introduction to Photoshop Selection Tools

- **Selection tools** isolate parts of an image for editing
- Common applications include background removal, color fill, and object extraction
- Tools are grouped in the Photoshop toolbar
- Basic selections include **rectangular**, **elliptical**, **row**, and **column**
- Holding click to reveal grouped tools
- Selections can be modified using add, subtract, and intersect options
- Starting by selecting images
- Using **Shift** + **click** to open multiple files
- Selections enable advanced edits like *content-aware fill*



Marquee Tools Overview

- Basic selection tools used to create geometric selections
- **Single Row/Column Marquee** selects a 1px line (rarely used)
- ***Rectangular Marquee Tool*** selects rectangular areas
- ***Elliptical Marquee Tool*** selects circular/elliptical areas
- Holding **Shift** to constrain aspect ratio (perfect square or circle)
- Moving selections with *Selection Tool* or *Move Tool*
- Using *Edit > Fill* to add colors or patterns to selections
- Foreground & background color control the fill behavior
- Using **Ctrl/Cmd + D** to deselect and **Shift + X** to switch colors



Lasso & Polygonal Selection Tools

- ***Lasso Tool*** creates freehand selections
- ***Polygonal Lasso Tool*** draws straight-edged selections
- Suitable for subjects with angular or straight-line edges
- Using **Zoom (Alt/Option + Scroll)** for better accuracy
- Great for detailed manual selections
- ***Magnetic Lasso Tool*** snaps to edges automatically (based on contrast)
- Not ideal if zooming disrupts anchor points
- All tools allow **Add/Subtract/Intersect** from selections



Magic Wand & Quick Selection Tool

- ***Magic Wand Tool*** selects areas with similar color
- Best for flat backgrounds with one solid color
- Struggles with complex or multicolored backgrounds
- ***Quick Selection Tool*** works like a brush to "paint" selections
- Uses edge detection to refine selection
- Pressing **Alt/Option** to subtract from the selection
- Zoom and brush size control selection precision
- Fast and intuitive for semi-complex subjects



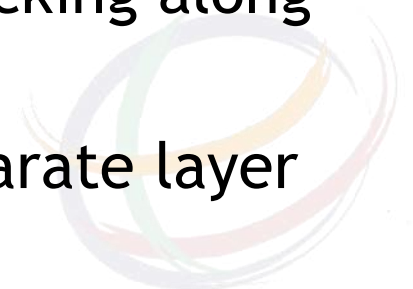
Object Selection & Pro Tips

- ***Object Selection Tool***: the most advanced (newer versions)
- Uses **AI** to detect and isolate objects automatically
- Great for complex subjects like people or products
- May not be available in older Photoshop versions
- Combining with other tools for best results
- Refining edges before finalizing
- Using shortcuts: **Shift + X**, **Ctrl/Cmd + D**, **Alt/Option**
- Practicing each tool for different image types



Background Removal in Photoshop

- Selecting and cutting out the subject from the image
- Using the *Magic Wand Tool*, if the background is plain and distinct - works best for clean edges
- Unlocking the background layer by clicking the lock icon, allowing edits
- Quick method: **Select background > press Delete** to erase it instantly
- Alternative method: **Select subject > Invert > Ctrl/Cmd + G** to duplicate it onto a new layer
- Using the *Polygonal Lasso Tool* for more precise selection, by clicking along the outline manually
- Hitting **Ctrl/Cmd + J** after selection to copy the subject to a separate layer
- Turning off the original layer to clearly see the isolated subject



Adding New Backgrounds & Shadows

- Importing a background image and dragging it into the project workspace for demonstration
- Moving the subject layer onto the new background and placing it above in the Layers panel
- Using **Free Transform (Ctrl/Cmd + T)** to adjust size and placement of the subject as needed
- ***Layer Styles > Drop Shadow*** to add depth and make the subject look grounded
- Tweaking shadow settings like size, opacity, and distance for a realistic effect
- Using **Alt/Option + Drag** to copy the shadow effect to other layers quickly
- Repeating for each subject or object being moved to the new scene
- Result: A realistic composite image with a clean, new background

Selecting a Complex Subject

- Opening the image file via *File > Open*
- The image background is white but blends somewhat with the subject, especially around hair and small details
- Using the *Object Selection Tool* to begin selecting the main subject
- Adding to the selection with **Add to Selection** option to include other missed parts
- Using the *Quick Selection Tool* to manually refine edges and select areas missed by the initial tool
- Including smaller elements (hair sections)
- The initial selection aims for a rough outline, with further refinement to follow



Modifying & Refining the Selection

- **Select > Modify** to adjust selection boundaries
- **Expand** the selection by 10-50 pixels to include additional area around the subject
- Using **Contract** to reduce the selection size for tighter cropping
- Applying **Feather** to soften edges, ensuring smoother transitions in the final cutout
- Using **Smooth** for subtler edge smoothing, more suited for objects
- Duplicating the selection onto a new layer with **Ctrl/Cmd + J** after refining
- These steps prepare the subject for seamless integration with a new background



Select & Mask for Edge Cleanup

- Activating **Select and Mask** from the Properties panel for detailed edge refinement
- Selecting appropriate **View Modes** to visualize selection better
- Enabling **Smart Radius** to improve detection of fine details like hair strands
- Adjusting settings such as **Feather**, **Contrast**, and **Shift Edge** to enhance edges
- Using the *Refine Edge Brush Tool* to carefully brush over hair areas
- Adjusting brush size using bracket keys and navigating zoom with the **Spacebar** and **Alt/Option** key
- Confirming changes and duplicating the refined selection to a new layer
- Inserting a new background layer and positioning the refined subject accordingly for natural blending



Exercise 5

- Open the target image file via *File > Open*
- Select the *Object Selection Tool* to isolate the subject by clicking directly on it
- Refine the selection with the *Quick Selection Tool*, using the **Add to Selection** option for accuracy
- Zoom in to include finer details and adjust edges precisely
- Apply feathering to the selection with a radius of approximately 0.9 pixels
- Enable **Smart Radius** for improved edge refinement
- Duplicate the selected subject to a new layer for isolated editing
- Open the replacement background image in a separate file



Exercise 5

- Extend the background width using the *Crop Tool* combined with *Content-Aware Fill* to maintain seamless edges
- Crop the lower section of the background image to remove unwanted areas
- Position and resize the subject layer above the adjusted background layer
- Adjust brightness and contrast independently for both subject and background to harmonize lighting conditions
- Modify the subject's hue and saturation to better match the background tones
- Insert text, adjust character spacing, and layer it behind the subject for visual composition
- Apply a drop shadow effect to the subject to enhance depth and separation
- Use **Levels** adjustments for brightness fine-tuning before saving the project

Introduction to Layer Masks in Photoshop

- **Layer masks** control the visibility of parts of a layer by revealing or concealing areas
- White on a layer mask reveals the layer content; black conceals it
- Adding a layer mask creates a white (fully visible) mask by default
- Painting black on the mask hides parts of the layer; painting white reveals them
- Layer and mask can be linked or unlinked to move independently
- Holding **Alt/Option** and clicking the mask thumbnail inverts the mask color
- Using *Brush tool* on masks to paint white or black, adjusting visibility with varying hardness and size
- Mask properties include **Density** (opacity) and **Feather** (edge softness) for refinement



Practical Application & Mask Options

- **Non-destructive background removal** using Layer masks (masking areas)
- Selecting an object with tools like *Quick Selection Tool* allows creating masks for precise cutouts
- Masks can be disabled, enabled, deleted, or applied permanently to the image
- Applying a mask merges the mask effect permanently into the image
- Additional mask operations include adding to selection, subtracting, intersecting, and refining edges
- Mask refinement options include **radius**, **feather**, and **smooth** adjustments for cleaner edges
- Layer masks provide flexibility to modify visibility without deleting pixels
- Using masks to return to the original image and adjusting the mask anytime

Creating Clipping Masks

- **Clipping masks** allow placing an image inside the shape or text of another layer
- Starting by placing an image above the target layer (text or shape)
- Right-clicking on the image layer and choosing **Create Clipping Mask**
- The visible part of the image is limited to the shape of the layer beneath
- The image can be repositioned or resized independently within the masked area
- Text or shapes can also be moved to adjust the final composition
- Merging both layers finalizes the effect and removes layer independence
- Clipping masks - widely used for creative effects and non-destructive design flexibility



Exercise 6

- Open the Woman image and background image
- Adjust brightness, contrast, hue (+4), and saturation (-7 to -9)
- Add **Layer Mask**, use soft brush (black) to hide image background
- Apply **blending mode** (*Hard Light*) to merge image with background
- Add **vertical text** using a thick font (*Intro*); reduce letter spacing
- Place new image above text; **Create Clipping Mask**
- Add **Stroke** (dark red tone) & **Drop Shadow** to text for emphasis
- Scale image and text together for balance
- Paint layer mask more to improve the image-text blend
- Save the project



Exercise 7

- Open the Child image
- Add a **Layer Mask**; Use soft brush to hide parts of the image
- Insert **horizontal text**: “Cute Girl” (font size ~400)
- Bring in second image, increase **opacity**
- Right-click image and **Create Clipping Mask** over text
- Set blending mode to **Normal** (optional: try *Screen*)
- Add **Stroke** to text (try black, size ~31-32)
- Adjust **position & scale** of text + image for balance
- Final composition: image masked with text “Cute Girl” overlaid



Introduction to Transform & Disort in Photoshop

- **Transform:** modifying object properties such as scale, rotation, and position
- Basic transform options: Scale, Rotate, Skew, Distort, Perspective
- **Skew:** shifts image edges vertically or horizontally without rotation
- **Distort:** enables free manipulation of object corners for custom shapes
- **Perspective:** adds a simulated 3D effect by altering angles
- **Flip** options: allow horizontal and vertical mirroring of images
- **Warp:** bends and curves images for dynamic effects (e.g., flag simulation)
- Shadows can be added manually using duplicated layers, brush tool, and blending modes



Liquify Tool

- Accessing the *Liquify Tool* via *Filter > Liquify* and opening in a separate workspace
- Converting layer to Smart Object for non-destructive editing with Smart Filters
- Brush size adjustable via keyboard brackets or sliders for precise control
- Liquify effect allows detailed reshaping and distortion of image elements
- Supports previewing changes to compare the original and edited versions
- Using *Liquify Tool* for subtle and dramatic image modifications such as body reshaping
- Effective for creative projects, including retouching and caricature creation



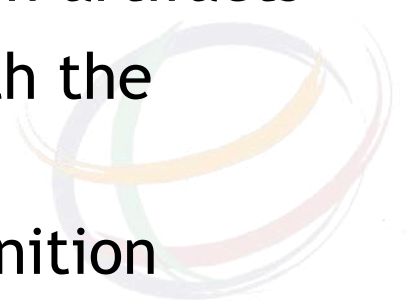
Liquify Tools & Practical Applications

- *Forward Warp Tool*: Pushes and distorts image areas (reshaping body parts)
- *Reconstruct Tool*: Partially or fully reverses liquify changes to restore the original image
- *Pucker Tool*: Shrinks or compresses parts of the image
- *Bloat Tool*: Expands or enlarges selected areas (e.g., muscles)
- *Freeze Mask Tool*: Protects areas from modification during liquify operations
- *Thaw Tool*: Removes freeze protection to allow editing again
- *Twirl Tool*: Applies rotational distortion, useful for caricatures and creative effects
- Example: Transforming an unhealthy figure into a stronger, fitter appearance
- Precise control over specific image areas for targeted adjustments



Exercise 8

- Import the basketball player image and the Serbian flag
- Duplicate the flag layer and convert it to a Smart Object for quality preservation during transformations
- Resize and position the flag on the subject's headband using Free Transform and Skew tools
- Use the Warp tool to adjust the flag shape, aligning it with the curvature of the headband
- Carefully manipulate anchor points and handles to avoid distortion artifacts
- Apply a blending mode, such as Multiply, to integrate the flag with the headband texture naturally
- Optionally, add a 2-pixel centered stroke around the flag for definition



Exercise 9

- Import the “Handsome Boy” image
- Use the *Object Selection Tool* to select the subject with default settings
- Duplicate the selection onto a new layer (**Ctrl/Cmd + J**) and hide the background layer
- Use the *Crop Tool* to expand the canvas without resizing the image
- Convert the duplicated layer to a Smart Object for non-destructive editing
- Add a Black & White adjustment layer to desaturate the duplicated layer
- Apply the Liquify filter to distort the image, creating a reveal effect by dragging portions of the colored image
- Confirm and apply changes to reveal the underlying colored image from the black and white layer



Exercise 9

- Adjust image brightness and contrast using Levels on both black & white and colored layers
- Modify saturation and hue on the colored image for color correction
- Create a new empty layer and fill with a gradient using the Gradient tool for background effect
- Add text layer with the words “The Mask”, position and resize as desired
- Change text color and apply transformations (skew, distort) for dynamic effect
- Duplicate text layer to create a layered text effect (“Take off the mask”) with varying opacity
- Finalize composition, ensuring text and image layers create visual complexity and clarity



Questions & Answers Homework

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Network of centers for regional short study programs in the countries of the Western

Balkans Call: ERASMUS-EDU-2023-CBHE

Project number: 101128813