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Computer Graphics and Animations

# ADOBE PHOTOSHOP 5

Filters & Effects; Basic Image Retouching;  
Mid-course Projects

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# Introduction to Filters in Photoshop

- **Filters** are visual effects that alter the appearance of an image
- Commonly used for creative edits and enhancements
- Converting the layer to a Smart Object before applying filters highly recommended
- Smart Objects allow non-destructive editing and effect adjustments
- Accessing filters through the **Filter** menu or **Filter Gallery**
- The **Filter Gallery** groups filters into categories like Artistic, Distort, Sketch, etc.
- Effects can be previewed and adjusted using individual sliders
- Image size can be reduced to speed up filter application



# Exploring Filter Gallery

- **Artistic filters** include Cutout, Colored Pencil, Dry Brush, Film Grain, etc.
- Each filter provides sliders for fine-tuning the effect (pressure, brightness, levels)
- **Cutout** simplifies colors and edges, useful for cartoon-like effects
- Filters like **Neon Glow** and **Diffuse Glow** add light-based effects
- **Texture filters** include Grain, Stained Glass, and Texturizer
- Multiple filters can be applied simultaneously by stacking them on Smart Objects
- Stacked filters function like adjustment layers; they can be reordered, disabled, or deleted without affecting the original image
- Applying finalized effects by clicking **OK** in the Filter Gallery



# Additional Filter Types

- Filters under **Blur** include Gaussian Blur and Blur Gallery for softening effects
- **Distort filters** like Ripple and Twirl deform the image creatively
- **Pixelate filters** such as Mosaic and Mezzotint simulate pixel or print textures
- Each filter serves different creative and design scenarios
- Many filters may seem impractical but offer unique results in advanced designs
- Smart Filters can be toggled on/off to compare changes
- Combining different filters allows for complex and layered visual effects



# Exercise 1

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- Open the target image (“Portrait”)
- Check image size: go to *Image > Image Size* and reduce to 30 x 20 inches
- Use **Ctrl/Cmd + 0** to fit the image to the screen
- Convert the image layer for smart filters: *Filter > Convert for Smart Filters*
- Apply the oil paint effect: *Filter > Stylize > Oil Paint*
- Adjust filter settings:
  - **Stylization** controls the realism vs. painterly look
  - **Cleanliness** defines how smooth or detailed the strokes appear
  - **Scale** adjusts the size of brush details
  - **Bristle Detail** adds texture realism
- Modify lighting and shine to match artistic intent; Save the work



# Exercise 2

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- Open both the Winter image and the Oil Painting image
- Adjust image brightness with *Image > Adjustments > Levels* as needed
- Resize image to manageable dimensions (40 inches wide)
- Convert image to smart filter: *Filter > Convert for Smart Filters*
- Apply *Filter > Blur Gallery > Field Blur* to simulate depth of field
  - Place multiple blur pins on the image
  - Set **0 blur** for foreground elements (closest to the camera)
  - Increase blur for background elements to enhance realism
- Optionally apply *Gaussian Blur* with a layer mask to manually control focus areas
- Use black brush on the mask to reduce blur where needed; Save the project



# Exercise 3

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- Open the Lady image and close any other open files
- Unlock the layer and convert it: *Filter > Convert for Smart Filters*
- Resize image for manageability (width: 27 inches)
- Apply halftone: *Filter > Filter Gallery > Sketch > Halftone Pattern*
- Choose **Dot** pattern and adjust size (3-5) for clarity
- Remove any previously applied filters from the gallery
- Ensure foreground/background colors are set to black and white before applying halftone
- Add a **Gradient Map Adjustment Layer** to enhance visual impact
- Choose preset or custom gradient (from “Blues” or “Pinks”)
- Modify color stops to increase contrast or stylize the effect; Save the work



# Exercise 4

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- Open the chosen image and close any previous projects
- Resize image (35 inches wide) to reduce processing load
- Unlock the layer and convert it to a Smart Object
- Apply filters via *Filter > Filter Gallery*
  - **Cutout Filter:** Set number of levels (4-5) for posterized effect
  - **Film Grain Filter:** Adjust grain intensity and highlight areas
  - Add a second Film Grain if needed for layered texture
- Experiment with filter stacking and order for desired result
- Optionally test Oil Paint Filter for added painterly effect
- Rely on trial and error to refine artistic output
- Save the file to finalize the stylized image





# Exercise 5

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- Open the Athlete image
- Unlock the layer and convert it to a *Smart Object*
- Duplicate the layer (**Ctrl/Cmd + J**) and hide the original
- Go to *Filter > Blur > Motion Blur*
- Adjust **Distance** to simulate realistic speed
- Avoid excessive blur - aim for natural running motion
- Use *Object Selection Tool* to select the subject
- Create a **Layer Mask** from the selection to isolate the figure
- Optionally feather the mask edges for a smoother blend
- Use the *Crop Tool (C)* + **Shift** + **Alt/Option** to trim unwanted blur edges
- Fine-tune blur level for enhanced motion illusion; Save the file



# Image Retouching in Photoshop

- **Image Retouching** involves using various tools and techniques to enhance, correct, or manipulate photos for a polished and professional result
- ***Remove Tool***: deletes unwanted elements with context-aware background fill
- ***Patch Tool***: repairs selected areas by blending with surrounding pixels
- ***Content-Aware Move Tool***: moves objects and fills original area automatically
- ***Spot Healing Brush Tool***: removes small blemishes using nearby texture sampling
- ***Red Eye Tool***: corrects flash-induced red-eye effect
- ***Burn Tool***: darkens targeted areas to control exposure
- ***Dodge Tool***: lightens specific regions for tonal balance
- ***Sponge Tool***: adjusts saturation levels in selected areas



# Remove Tool Basics

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- ***Remove Tool***: introduced in recent Photoshop versions as a retouching solution
- Located under the ***Spot Healing Tool*** group; shortcut key: **G**
- Fills painted areas with generated content using content-aware technology
- Works on background or separate layer, depending on Sample All Layers setting
- Editing directly on the background layer causes irreversible changes
- Best practice involves creating a new layer to preserve the original image
- Enabled **Sample All Layers** allows nondestructive editing on new layers
- Tool effectiveness varies based on background complexity and object placement



# Practical Uses & Limitations of the Remove Tool

- Removal of simple objects like fruit or cloth yields clean results with minimal effort
- Complex structures like castles may lead to repeating textures or pattern artifacts
- Layer masking and multiple passes improve visual consistency in difficult edits
- Inconsistent texture areas (overlapping shadows or lines) may appear unnatural
- Effectiveness decreases with high-detail or symmetrical backgrounds
- Can be used in combination with other retouching tools for refined output
- Edits remain reversible if applied on a new layer with proper layer management
- Best applied on images with clear, textured backgrounds and minimal overlapping elements

# Patch Tool

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- The *Patch Tool* requires manual selection and movement of target areas for retouching
- Photoshop blends source and destination areas after patch movement
- Best suited for small adjustments in areas with consistent textures or patterns
- Larger or complex patterned areas can cause imperfect blending and visible seams
- Less automatic than the *Remove Tool*; user controls source-to-target mapping
- Limited effectiveness on highly detailed or repeating backgrounds
- *Remove Tool* generally provides better results for complex or larger areas
- *Patch Tool* useful for precise, controlled retouching where blending is predictable

# Content-Aware Move Tool

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- The ***Content-Aware Move Tool*** allows marquee selection and repositioning of image areas
- Photoshop automatically blends moved content with surrounding pixels
- Blending may require manual refinement for seamless results
- Useful for relocating elements like eyes or objects within an image
- Modes available: **Move** (relocate selected area) and **Extend** (duplicate selected area)
- Selection modification options include **add**, **subtract**, **intersect**, and **expand**
- Extend mode creates copies without removing original content
- Effective for compositional adjustments, but blending can be imperfect



# Spot Healing Brush Tool

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- The ***Spot Healing Brush Tool*** removes blemishes and spots quickly
- Creating a new layer for non-destructive editing
- Adjustable brush size and hardness controls
- **Sample All Layers** option enables painting on new layer without altering original
- Effective for small, isolated blemishes
- Overuse can cause unnatural thickness or texture
- Best suited for simple spot removal, may require other tools for complex areas



# Healing Brush Tool

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- The *Healing Brush Tool* requires manual sampling of clean areas (Alt/Option + Click)
- **Gradual blending** fills blemishes using sampled texture and color
- Useful for areas needing more precise control than with Spot Healing Brush
- The *Remove Tool* more suitable for clearing larger blemishes or unwanted objects
- Image size affects processing speed; smaller images retouch faster
- Combining tools improves overall retouching quality
  - Using *Remove Tool* for large flaws
  - Following up with *Spot Healing Brush Tool* for fine details
  - Using *Healing Brush Tool* for color and texture matching
- Final result: clear, retouched surface with no visible blemishes





# Red Eye Tool

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- Red eye occurs commonly in digital photography
- Photoshop includes a dedicated ***Red Eye Tool*** under retouching tools for red eye removal
- Selecting the *Red Eye Tool* and clicking directly on the red eye area
- The tool instantly removes red eye with a single click
- Simple, fast, and effective correction method
- Allows quick fixes without complex editing
- Option to save image after correction



# Teeth Retouching in Photoshop

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- Using the *Dodge Tool* to increase brightness on targeted areas
- Adjusting of brush size and hardness to achieve smooth transitions
- Using the *Sponge Tool* in desaturation mode to reduce discoloration
- Gradual enhancement to avoid unnatural whitening effects
- Importance of working on separate layers for non-destructive editing
- Using before-and-after comparison to evaluate retouching quality
- Considering midtones, shadows, and highlights during adjustment
- Preserving natural texture while improving aesthetic appearance



# Eye Retouching in Photoshop

- Employing the *Sponge Tool* to desaturate excessive redness in the eyes
- Brightening eye whites and highlights via the *Dodge Tool* application
- Fine-tuning brush settings to ensure subtle and realistic corrections
- Using the *Burn Tool* for adding depth and shadow where necessary
- Systematic desaturation and brightening to maintain natural eye color
- Verification of results through comparison between the original and retouched images
- Avoiding over-editing to preserve photographic integrity
- Integrating tool settings to target midtones, shadows, and highlights effectively



# Introduction to Brushes in Photoshop

- **Brushes:** essential tools for painting, masking and creating designs
- *Brush Tool* shortcut key: **B**
- Default brushes include size and hardness settings; adjusting using sliders
- Default brushes can be restored via the **Append Default Brushes** option
- Brush presets are grouped by categories: General, Dry Media, Wet Media, Special Effects
- Brush rotation and angle adjustment available
- Brush panel accessible via *Window > Brushes* for advanced options
- Brushes are categorized: **General, Dry Media, Wet Media, and Special Effects**
- The brush interface includes settings for customizing stroke behavior



# Brush Settings & Blend Modes

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- **Blend modes** control how brush strokes interact with layers below
- Common blend modes include **Normal**, **Dissolve**, **Behind**, **Clear**, **Darken**, **Difference**; various effects offered
- **Opacity** adjusts transparency level of brush strokes
- **Flow** controls intensity of brush application, distinct from opacity
- **Pressure sensitivity** enabled for drawing tablets affects opacity and brush size
- **Smoothing** reduces jagged edges and improves stroke fluidity
- Higher smoothing can cause lag but enhances stroke quality



# Drawing Tablet vs Mouse Input

- **Drawing tablets** allow pressure-sensitive control of brush size and opacity
- **Mouse** input lacks pressure sensitivity and size variation
- Experimenting with both tools shows clear advantages of tablets
- Tablet pressure creates dynamic strokes varying in thickness
- Pressure control must be enabled in brush settings for tablets
- Experimenting with pressure brushes yields more natural digital artwork
- Different brush presets respond differently to pressure input
- Pressure variation enables precise, detailed sketching and writing
- Mouse input remains viable for basic brush functions without pressure effects



# Symmetry & Special Brushes

- ***Symmetry Tools*** enable mirrored drawing on vertical, horizontal, and dual axes
- **Mandala symmetry** divides canvas into multiple segments for repetitive patterns
- Symmetry aids in creating complex, balanced designs efficiently
- Special brushes include **smudge**, **eraser**, and **paint brushes**
- **Kyle T. Webster** brushes offer advanced artistic effects, available via subscription
- Smudge brushes blend colors for textured effects
- Brushes can simulate traditional media like pencil, ink, or paint digitally



# Introduction to Custom Brushes

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- Brush Settings enable detailed control over digital painting tools
- Custom brushes can be imported to extend creative possibilities
- Downloaded brushes provide various effects, enhancing realism
- Importing Custom Brushes by selecting files from designated folders
- Load brushes one by one into the brush panel; multiple brushes can also be loaded simultaneously
- Custom brushes appear in a defined section of the brush list; they include categories such as spray, painter, dash and fog effects
- Importing brushes allows users to experiment with diverse stroke styles





# Practical Application & Effects of Custom Brushes

- Using new layers to test brushes and isolate brush strokes from the background
- Brush flow can be adjusted to control opacity and stroke intensity
- Specific brushes simulate effects like dripping blood, fog, texture patterns, etc.
- Painter brushes replicate natural paint strokes for digital painting
- Blend modes modify how colors interact, enhancing visual effects
- Color and brush size adjustments create varied artistic outcomes
- Custom brushes facilitate the creation of complex, realistic textures
- Exploring brushes and settings independently while working



# Brush Settings Overview

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- **Brush tip shape** defines the fundamental appearance of the stroke
- **Size, roundness, and rotation** parameters allow precise shape control
- **Pressure sensitivity** can modify stroke size dynamically
- **Spacing** determines the interval between brush marks in a stroke: Low spacing = continuous stroke; high spacing = dotted effect
- **Shape dynamics** include pressure sensitivity and jitter for variation
- **Scattering** distributes brush marks for textured or particle effects
- Adjusting **Count** and **Count Jitter** for stroke density
- **Texture** and **dual brush** settings add complexity by combining effects
- **Color dynamics** enable automatic variation in hue, saturation, and brightness
- **Transfer** controls opacity and flow, often linked to pressure sensitivity

# Exercise 6

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- Open the “Young Girl” image
- Use the *Crop Tool* (press **C**) to crop the image to a near-square shape
- Create a new **layer** and move it below the image layer in the layer panel
- Fill the new layer with white color via *Edit > Fill*
- Select the image layer, hold **Alt** (**Option** on **Mac**), and click the **Layer Mask** icon
- This action applies a **black-filled layer mask**, hiding the image completely
- Select the layer mask, activate the *Brush Tool*, and choose a custom brush
- Begin brushing on the mask to reveal parts of the hidden image



# Exercise 6

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- Test different custom brushes like **watercolor**, **fog**, **smoke**, or **dash** brushes
- Use **bracket keys** [ ] to adjust brush size dynamically while painting
- Press **X** to toggle between white (reveal) and black (hide) on the mask
- Avoid revealing sharp edges by selectively hiding with black brush strokes
- Experiment with brush **rotation** and **stroke** effects for dynamic texture
- Emphasize facial features (eyes, mouth) by revealing them clearly
- Change the background by placing a colored rectangle layer behind the image
- Add final decorative strokes and sample colors using the *Eyedropper Tool (I)*



# Exercise 7

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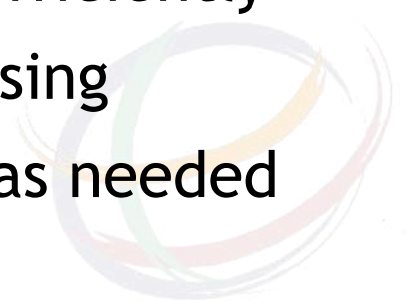
- Open the “Runner” image
- Use the *Object Selection Tool* to isolate the subject from the background
- Refine the selection with **Select and Mask**, then duplicate the selection (Ctrl/Cmd + J)
- Create a new 8x8-inch document and transfer the subject to this new file
- Add a new blank layer to prepare for the dispersion painting process
- Choose a **Dispersion Brush** from the imported brush set (avoid uniform patterns)
- Use the *Eyedropper Tool* to sample colors from the subject for realism
- Begin painting on the blank layer using *Brush Tool* (B) to simulate dispersion



# Exercise 7

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- Alternate between sampled subject colors and white to create depth and variation
- Use the *Eraser Tool* (E) to refine areas and control the boundaries of dispersion
- Maintain dispersion near the edges of the subject to preserve structure
- Adjust brush **size**, **hardness**, and **rotation** for more natural dispersion strokes
- Use multiple layers to manage and clean different color strokes efficiently
- Optional: Use white brush strokes to hide mistakes instead of erasing
- Switch to default black & white colors using **D** and toggle with **X** as needed
- Save the final effect (**Ctrl/Cmd + S**) and further refine if needed



# Mid-course Projects

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- Working on the **mid-course projects** as the concluding part of the **Beginner to Intermediate Module**
- Projects designed to **integrate skills and techniques** from previous lectures
- Applying knowledge of **brushes, masks, selections, layer effects...**
- Each project reinforces understanding through **practical implementation**
- Encouraging **creative exploration** of Photoshop's tools and workflows
- Providing an opportunity to **demonstrate mastery** of core concepts
- Projects serve as a **comprehensive review and skill showcase**



# Mid-course Project 1 – Stunning Nature

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- Launch Photoshop and open the image “Stunning Nature” from the project folder
- Locate and install the “Clash Display” font from the project files
- In Photoshop, select the font and type the word “NATURE” character by character
- Use the *Move Tool* and hold **Alt** to duplicate each letter horizontally
- Scale and arrange characters to visually overlap like the reference design
- Fine-tune letter alignment, adjusting vertical and horizontal placement
- Group all text layers (**Ctrl/Cmd + J** to duplicate, **Ctrl/Cmd + G** to group)





# Mid-course Project 1 – Stunning Nature

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- Rasterize each individual character layer by right-clicking and selecting **Rasterize Type**
- Use **Ctrl/Cmd + Click** on a letter's thumbnail to make a precise selection
- With the *Brush Tool* (soft black brush), paint subtle shadows inside the selected areas
- Repeat the selection and painting process for each overlapping pair
- Ensure shadows remain inside letters by brushing within the active selection
- Use **Right Click → Deselect** after each shadow application
- Finalize shadows between letters A/N, U/T, R/U, and E/R for realistic depth



# Mid-course Project 1 – Stunning Nature

- Add a grainy texture via *Filter > Noise > Add Noise* ( $\approx 11\%$ ) to each letter
- Merge the grouped text layer and apply a global Drop Shadow effect
- Add the word “Stunning” above “NATURE” using the “Gabriella Smith” font
- Set the “Stunning” text color to light blue and add a sharp Drop Shadow (size  $\approx 3$ )
- Apply a vignette by adding a Solid Color layer and masking it with a large soft brush
- Adjust the Solid Color layer opacity to around 58% for subtle darkening
- Resize and reposition elements if needed to enhance visual balance
- Save the project



# Mid-course Project 2 – Money Portrait

- Open the portrait image ("Professor") from the project folder
- Resize image via *Image > Image Size* to approx. 24 inches in width
- Add a Solid Color Fill Layer with a light gray background
- Convert the portrait layer to a Smart Object for non-destructive editing
- Access Filter Gallery and apply two sketch effects:
  - **Halftone Pattern:** Size = 3, Contrast = 3, Pattern Type = Dots
  - **Torn Edges:** Image Balance = 26, Smoothness = 12, Contrast = 2
- Preview and confirm the effect, adjusting zoom for better visibility



# Mid-course Project 2 – Money Portrait

- Set the portrait layer's Blending Mode to **Hard Mix** for a printed currency look
- Select the gray Fill Layer and apply Twirl Distortion via *Filter > Distort > Twirl*, set Angle  $\approx 120^\circ$
- Add a Gradient Map Adjustment Layer to simulate currency colors:
  - Gradient range: from white to green, adjust tone as needed
- Optionally revisit the **Halftone Pattern** and **Torn Edges** settings to refine detail
- Save the file to preserve the completed Money Effect



# Questions & Answers

## Mid-course Projects for Every Student

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