

Computer Graphics and Design

Lecture 5

Photoshop Interface and Tools.

Lecturer: Baya, Trevor.

Learning Outcomes:

- **Navigate the Interface:** Understand and identify key components of the Photoshop interface, including the toolbar, options bar, and panels.
- **Utilize Basic Tools:** Demonstrate proficiency in essential tools such as the Move Tool, Selection Tools, and Brush Tools for basic image editing.
- **Apply Advanced Tools:** Effectively use advanced tools like the Pen Tool, History Brush Tool, and Dodge Tool for more complex editing tasks.
- **Access Menu Functions:** Utilize different menu options (File, Edit, Image, Layer, etc.) to navigate Photoshop's features and functionalities.
- **Manipulate the Canvas:** Gain skills in canvas manipulation with tools like the Rotate View Tool and Crop Tool to enhance workflow and composition.
- **Create and Edit Paths:** Develop the ability to create and manipulate paths using the Path Selection Tool and Shape Tools for vector graphics.
- **Evaluate and Critique Work:** Learn to critically evaluate personal and peer work, providing constructive feedback based on Photoshop techniques and design principles.

What is Adobe Photoshop?

Photoshop is a powerful **raster graphics editor** primarily used for **image editing**, **graphic design**, and **digital art**. It is widely recognized as the industry-standard software for photo manipulation, retouching, and compositing. Photoshop enables users to work with layers, filters, brushes, and masks to create or enhance images with a high level of precision and creativity.

Common uses of Photoshop include:

- **Photo editing** and **retouching**.
 - **Graphic design** for posters, logos, and advertisements.
 - **Digital painting** and illustrations.
 - **Web design** and creating assets for social media.
 - **3D modeling** and **video editing** (in some versions).
-

Who Made Photoshop?

Photoshop was originally created by **Thomas Knoll** and **John Knoll**, two brothers, in 1987. Thomas developed the initial version as a program to display grayscale images on a monochrome display. His brother, John, who was working at **Industrial Light & Magic**, encouraged further development of the software.

In 1988, the Knoll brothers licensed Photoshop to **Adobe Systems**, where it was officially released as **Adobe Photoshop 1.0** in 1990. Since then, Adobe has developed and maintained Photoshop, releasing new versions with enhanced features regularly.

Today, Photoshop is part of the **Adobe Creative Cloud** suite of applications and continues to evolve, offering users advanced capabilities in digital design and image manipulation.

The **Welcome to Photoshop** window (or **Home Screen**) appears when you launch Photoshop and provides quick access to various features and resources. It helps users get started quickly by offering shortcuts and templates. Here's what the **Welcome** or **Home Screen** contains: Recent Files Panel, Create New Button, Open Button, and Preset Tabs

The **File Menu** in Photoshop contains essential commands for file management, importing/exporting, printing, and document settings. Here's an overview of the main options available in the **File** menu:

Photoshop Menus

1. This **File Menu** is the primary hub for managing your documents, saving work, and exporting files in various formats, ensuring smooth workflow and file handling.
2. The **Edit Menu** in Photoshop provides commands for manipulating content, transforming images, adjusting settings, and managing selections. It also contains options for working with the clipboard, managing presets, and using some advanced tools like content-aware editing. Here's a breakdown of the main options available in the **Edit** menu:
3. The **Image Menu** in Photoshop provides powerful tools for adjusting and manipulating the overall characteristics of an image. This menu allows users to modify image attributes such as color, size, rotation, and resolution. Below is an overview of the commands available in the **Image Menu**:
4. The **Layer Menu** in Photoshop is essential for managing layers, which are the building blocks of any Photoshop project. Layers allow users to work non-destructively, apply effects, adjust blending modes, and control the visibility and stacking order of elements. Here's an overview of the commands available in the **Layer Menu**:

5. The **Type Menu** in Photoshop provides tools and options for working with text and typography. This menu allows users to create and manipulate text layers, apply various type settings, and adjust typography properties. Here's an overview of the commands available in the **Type Menu**:
6. The **Select Menu** in Photoshop is crucial for working with selections, which are used to isolate and manipulate specific areas of an image or layer. The commands within this menu allow users to create, modify, and refine selections effectively. Here's an overview of the commands available in the **Select Menu**:
7. The **Filter Menu** in Photoshop provides a variety of tools and effects that can be applied to layers or selections to enhance images, create artistic effects, or improve the overall appearance of a design. Filters can be applied non-destructively using Smart Filters or destructively, and they play a crucial role in image editing and creative design. Here's an overview of the commands available in the **Filter Menu**:
8. The **Window Menu** in Photoshop provides access to various panels, tools, and workspaces that help users manage their workspace and customize the layout according to their workflow preferences. Here's an overview of the commands and options available in the **Window Menu**:
9. The **Help Menu** in Photoshop provides users with access to a wealth of resources, including documentation, tutorials, and support options. It is designed to assist users in understanding the software, troubleshooting issues, and enhancing their skills. Here's an overview of the commands and options available in the **Help Menu**:

Photoshop tools

Move Tool

The **Move Tool** is a fundamental tool in Photoshop that allows users to reposition layers and selections within an image. It enables users to click and drag to move entire layers, making it easier to arrange elements in a composition. The tool also includes options for

automatic layer selection and alignment features, enhancing workflow efficiency when working with multiple layers. Users can create duplicates of layers by holding down the Alt key (or Option key on Mac) while dragging.

Rectangular Marquee Tool

The **Rectangular Marquee Tool** is used for making rectangular selections in an image. By clicking and dragging on the canvas, users can isolate specific areas for editing or manipulation. This tool offers various selection styles, including fixed ratios and sizes, allowing for precise control over the selection dimensions. It also supports adding to or subtracting from existing selections, making it a versatile choice for selecting specific portions of an image.

Elliptical Marquee Tool

The **Elliptical Marquee Tool** functions similarly to the Rectangular Marquee Tool but creates elliptical selections instead. Users can click and drag to form circles or ellipses, allowing for circular or oval-shaped selections within an image. Like the rectangular version, it supports various styles for fixed dimensions, ratios, and enables users to refine their selections by adding or subtracting from existing ones.

Lasso Tool

The **Lasso Tool** provides a freeform selection capability, allowing users to draw custom shapes around areas of interest. By clicking and dragging, users can create complex selections that follow the contours of the subject or area they wish to isolate. The Lasso Tool is particularly useful for selecting irregular shapes, and it includes variations such as the **Polygonal Lasso Tool** for straight-edged selections and the **Magnetic Lasso Tool** that automatically detects edges in an image.

Quick Selection Tool

The **Quick Selection Tool** allows users to paint a selection using brush-like strokes, making it easier to select subjects with complex edges. By clicking and dragging over the area to be selected, Photoshop automatically expands the selection based on color and texture similarities. This tool is particularly useful for quickly isolating subjects from their backgrounds, and it works well in conjunction with the **Refine Edge** tool for further adjustments.

Magic Wand Tool

The **Magic Wand Tool** is designed for selecting areas of similar color within an image. By clicking on a specific color, the tool selects all adjacent pixels with similar colors, making it easy to isolate backgrounds or specific elements. Users can adjust the tool's tolerance level to include more or fewer similar colors, allowing for greater control over the selection process. This tool is most effective in images with high color contrast.

Crop Tool

The **Crop Tool** enables users to trim and adjust the dimensions of an image. By dragging the corners of the crop box, users can select the area they wish to keep, while the rest of the image is discarded. The Crop Tool also offers options for setting specific aspect ratios and straightening images, making it essential for refining compositions and improving image framing.

Frame tool

The **Frame Tool** in Photoshop is designed to streamline the process of creating placeholders for images in layouts, making it especially useful for tasks like mockups or magazine designs. It allows users to easily draw rectangular or elliptical frames on the canvas, which can then be filled with images that automatically fit within the frame's boundaries. Images inside frames can be resized and adjusted without affecting the frame itself, providing a flexible and non-destructive way to work with visuals in

compositions. This tool enhances the layout design workflow, simplifying image placement and adjustments.

Eyedropper Tool

The **Eyedropper Tool** in Photoshop allows users to sample and pick up colors from an image or canvas. When using the Eyedropper Tool, clicking on any area of the image captures the color of the pixels beneath the cursor, making it the active foreground color in the color palette. This tool is especially useful for ensuring color consistency throughout a design, allowing users to match colors precisely from one part of the image to another or from an external reference. It also offers additional settings to sample colors from a specific point or an average area, depending on the desired accuracy.

History Brush

The **History Brush Tool** in Photoshop allows users to paint a previous state or snapshot of an image back onto the current version. It works by restoring parts of the image to an earlier point in its editing history, as recorded in the **History Panel**. This tool is particularly useful for selectively undoing edits or bringing back specific details from an earlier stage without affecting the entire image. By using the History Brush Tool, users can achieve complex, non-destructive adjustments, blending past and present states of the image with precise control.

Blur Tool

The **Blur Tool** in Photoshop is used to soften or smooth out areas of an image by reducing the sharpness and contrast of pixels. When applied, it creates a blurring effect that can be used to diminish details, reduce noise, or create a shallow depth-of-field look. The Blur Tool is especially useful for retouching photos, where it can help smooth skin, soften harsh edges, or de-emphasize distracting elements in the background. Users can control the strength of the effect by adjusting the tool's opacity and brush size, allowing for both subtle and strong blurring.

Slice Tool

The **Slice Tool** is used for dividing an image into smaller sections, which can be useful for web design or creating image maps. Users can create slices by clicking and dragging, allowing for the export of individual sections of an image. This tool is particularly beneficial for optimizing images for web use, where different sections may need to be saved at different resolutions or formats.

Spot Healing Brush Tool

The **Spot Healing Brush Tool** is a powerful retouching tool that allows users to quickly remove imperfections in an image. By painting over blemishes or unwanted objects, the tool automatically blends the surrounding pixels to seamlessly repair the area. It is particularly useful for tasks such as removing skin blemishes in portrait photography or fixing small distractions in a scene.

Healing Brush Tool

The **Healing Brush Tool** is similar to the Spot Healing Brush but provides more control over the healing process. Users can define a source point to sample pixels from, allowing them to manually choose the area to blend with the imperfections they want to correct. This tool is particularly effective for more complex retouching tasks where precise control over the healing process is necessary.

Patch Tool

The **Patch Tool** is used for repairing larger areas of an image by sampling from a different part of the image. Users can draw a selection around the area they want to fix and then drag it to a source area that will fill in the selection. This tool is particularly useful for removing larger objects or blemishes and is often used in conjunction with the Healing Brush for seamless results.

Brush Tool

The **Brush Tool** is a versatile painting tool that allows users to create custom strokes and textures on a canvas. Users can choose from a variety of brush shapes, sizes, and textures, enabling them to paint or draw with precision. The Brush Tool is essential for digital painting, retouching, and creating artistic effects, allowing for extensive creative expression in Photoshop.

Clone Stamp Tool

The **Clone Stamp Tool** allows users to duplicate parts of an image by painting with sampled pixels from another area. By holding down the Alt key (or Option key on Mac) and clicking to define a source point, users can then paint over the target area to apply the cloned pixels. This tool is particularly useful for removing unwanted elements or duplicating features within an image.

Eraser Tool

The **Eraser Tool** is used to remove pixels from an image, functioning like a brush but in reverse. Users can select different brush sizes and hardness levels to control how they erase parts of their image. The Eraser Tool can also be used to create transparency in a layer, making it essential for refining compositions and correcting mistakes.

Gradient Tool

The **Gradient Tool** allows users to create smooth transitions between colors in an image. By selecting a gradient preset or creating a custom gradient, users can apply it to a selected area by clicking and dragging across the canvas. This tool is commonly used for backgrounds, overlays, and blending effects, enhancing the visual appeal of compositions.

Dodge Tool

The **Dodge Tool** in Photoshop is used to lighten specific areas of an image by increasing the exposure of the pixels it is applied to. It mimics traditional darkroom techniques where certain areas of a photograph are exposed to more light to brighten them. The Dodge Tool is commonly used in photo retouching to enhance highlights, brighten facial features, or bring attention to specific areas of an image. Users can adjust the tool's range (shadows, midtones, or highlights) and exposure settings to control the intensity of the lightening effect, allowing for precise and subtle adjustments.

Paint Bucket Tool

The **Paint Bucket Tool** is used for filling a selected area with a solid color or gradient. Users can click on any area of the image to fill it, and it works based on color similarity. The Paint Bucket Tool is often used to quickly change background colors or fill selections, making it a convenient option for background design and color correction.

Type Tool

The **Type Tool** is essential for adding text to an image. Users can click anywhere on the canvas to create a new text layer and begin typing. The Type Tool offers various options for adjusting font, size, color, and alignment, allowing for creative typography integration into designs. This tool is crucial for creating posters, advertisements, and any design that incorporates text.

Pen Tool

The **Pen Tool** is a precision tool used for creating paths and shapes. Users can click to create anchor points and control curves by adjusting the handles. This tool is particularly useful for creating complex shapes and selections, as it allows for detailed

and precise editing. The Pen Tool is essential in graphic design for logo creation, vector illustrations, and intricate selections.

Path Selection Tool

The **Path Selection Tool** in Photoshop is used for selecting and manipulating entire paths created with the Pen Tool or Shape Tools. It allows users to click on a path to select it and then move, transform, or modify it as needed. When a path is selected, users can adjust its shape, change its fill or stroke properties, and apply other transformations. The Path Selection Tool is particularly useful in vector graphic design and illustration, where precise control over paths is essential. It helps streamline the workflow by allowing users to manage and edit paths efficiently within their projects.

Shape Tools

The **Shape Tools** consist of several tools for creating geometric shapes such as rectangles, ellipses, polygons, and custom shapes. Users can click and drag on the canvas to create shapes, which can be filled with color or gradients and modified using various options in the Options Bar. Shape Tools are valuable for designing logos, icons, and other graphic elements.

Rotate View Tool

The **Rotate View Tool** in Photoshop allows users to temporarily rotate the canvas to a desired angle for more comfortable editing and painting. This tool is particularly useful for artists and designers who need to work on specific details or strokes that may be easier to execute at a different angle. Users can click and drag on the canvas to rotate it freely or use the Options Bar to set a specific angle. Importantly, the Rotate View Tool does not alter the actual image; it only changes the view, allowing for precise adjustments without affecting the final composition. Users can easily return the canvas to its original orientation by resetting the view or using the keyboard shortcut.

Slice Tool

The **Slice Tool** is utilized for dividing an image into smaller sections, making it ideal for web design or creating image maps. Users can create slices by clicking and dragging over the area they wish to cut, allowing for individual sections to be saved or exported separately. This tool is particularly beneficial for optimizing images for web use, where different sections may require distinct file formats or resolutions.

Hand Tool

The **Hand Tool** enables users to navigate around the canvas when zoomed in on an image. By clicking and dragging, users can move the viewable area of the image, making it easier to access different parts of the canvas without altering the zoom level. This tool is especially helpful for working on detailed sections of an image or for large files.

Zoom Tool

The **Zoom Tool** allows users to magnify or reduce the view of an image. By clicking to zoom in or holding Alt (Option on Mac) to zoom out, users can focus on specific details or get an overview of their composition. This tool is crucial for working with intricate details and ensuring precision in editing tasks.

References:

"Digital Art Fundamentals," Robin Landa, Open Textbook Library, 2020.

"Introduction to Graphic Design," Richard Hollis, Open Library, 2013.

"The Elements of Graphic Design," Alex W. White, Internet Archive, 2011.

"Computer Graphics: Principles and Practice," John F. Hughes et al., MIT OpenCourseWare, 2006.