Blend modes in Photoshop are powerful tools that determine how two layers interact with each other, based on color, light, and contrast. Each mode can dramatically alter the appearance of an image composite by changing how pixels on the selected layer blend with the pixels on the layer below. Here's a breakdown of the main categories and modes in Photoshop v25:

1. Normal Blend Modes

- **Normal**: Displays the selected layer normally with no blending. Opacity can be adjusted, but no interaction occurs between layers.
- **Dissolve**: Replaces pixels with a pattern of dots, creating a noisy, dithered effect. It becomes more apparent as opacity decreases.

2. Darken Blend Modes

These modes make the resulting image darker.

- **Darken**: Compares pixels from both layers and keeps the darker color in each area.
- **Multiply**: Multiplies the color values of the layers, creating a darker, more intense image. Ideal for creating shadows.
- **Color Burn**: Darkens the image by increasing contrast, producing intense shadows and saturated colors.
- **Linear Burn**: Darkens the base layer by decreasing brightness based on the blend layer's color. It's more intense than Multiply.
- **Darker Color**: Compares overall brightness between layers and displays only the darker pixels. It's similar to Darken but without per-channel comparison.

3. Lighten Blend Modes

These modes make the resulting image lighter.

- **Lighten**: Compares pixels from both layers and keeps the lighter color in each area.
- **Screen**: The opposite of Multiply, it lightens the colors by inverting, multiplying, and inverting again. Often used to brighten images or add haze.
- **Color Dodge**: Lightens the base layer by decreasing contrast, creating intense highlights.
- **Linear Dodge (Add)**: Lightens the base layer by increasing brightness based on the blend layer's color, resulting in a high-contrast effect.
- **Lighter Color**: Compares the brightness of pixels from both layers and keeps only the lighter pixels.

4. Contrast Blend Modes
These modes increase or decrease contrast based on the blend color.

- **Overlay**: Combines Multiply and Screen; dark colors become darker, and light colors become lighter, adding contrast.
- **Soft Light**: Similar to Overlay but softer. It adds subtle light or dark effects, creating a gentle contrast.
- **Hard Light**: Combines Multiply and Screen, using the blend layer as a light source. It creates a sharp, intense contrast.
- **Vivid Light**: Combines Color Burn and Color Dodge. Dark areas darken further, and light areas lighten further.
- **Linear Light**: Combines Linear Burn and Linear Dodge to add or subtract brightness.
- **Pin Light**: Replaces pixels based on blend color, either keeping highlights or shadows while discarding midtones.
- **Hard Mix**: Adds the RGB values of the base and blend colors, reducing colors to red, green, blue, black, or white.

5. Comparative Blend Modes
These modes create differences based on color values between the layers.

- **Difference**: Subtracts the blend layer's color from the base layer or vice versa, resulting in high-contrast, inverted effects.
- **Exclusion**: Similar to Difference but with lower contrast, producing less intense colors.
- **Subtract**: Subtracts the blend color from the base color, darkening the image.
- **Divide**: Divides the base color by the blend color, lightening the image.

6. Component Blend Modes
These modes work on individual color components (Hue, Saturation, Color, and Luminosity).

- **Hue**: Keeps the base layer's luminance and saturation but adopts the blend layer's hue.
- **Saturation**: Keeps the base layer's luminance and hue but adopts the blend layer's saturation.
- **Color**: Keeps the base layer's luminance but adopts the blend layer's hue and saturation, useful for coloring black-and-white images.
- **Luminosity**: Keeps the base layer's hue and saturation but adopts the blend layer's luminance, useful for controlling lightness.

Tips for Using Blend Modes

- **Multiply** and **Screen** are commonly used for darkening or lightening.
- **Overlay** and **Soft Light** are great for adding contrast.
- **Color** and **Luminosity** are useful for color grading and tonal adjustments.
- **Experimenting** is key—try different modes to see their effects, especially when creating composites or effects like double exposure.

These blend modes allow you to experiment creatively, from subtle tonal adjustments to dramatic effects.

NOTES: