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EDPS 6560
Multimedia Learning
Drawing Shapes in Ai and CSS Box Model

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Class Objectives

By the end of this class you should be able to:

- Identify elements of the Illustrator user interface and demonstrate knowledge of their functions

- Demonstrate knowledge of layers

- Demonstrate knowledge of how to use the type tools

- Demonstrate knowledge of how to use the shape tools

- Demonstrate knowledge of how to modify and transform objects

- Using the CSS Box Model properties to layout HTML elements
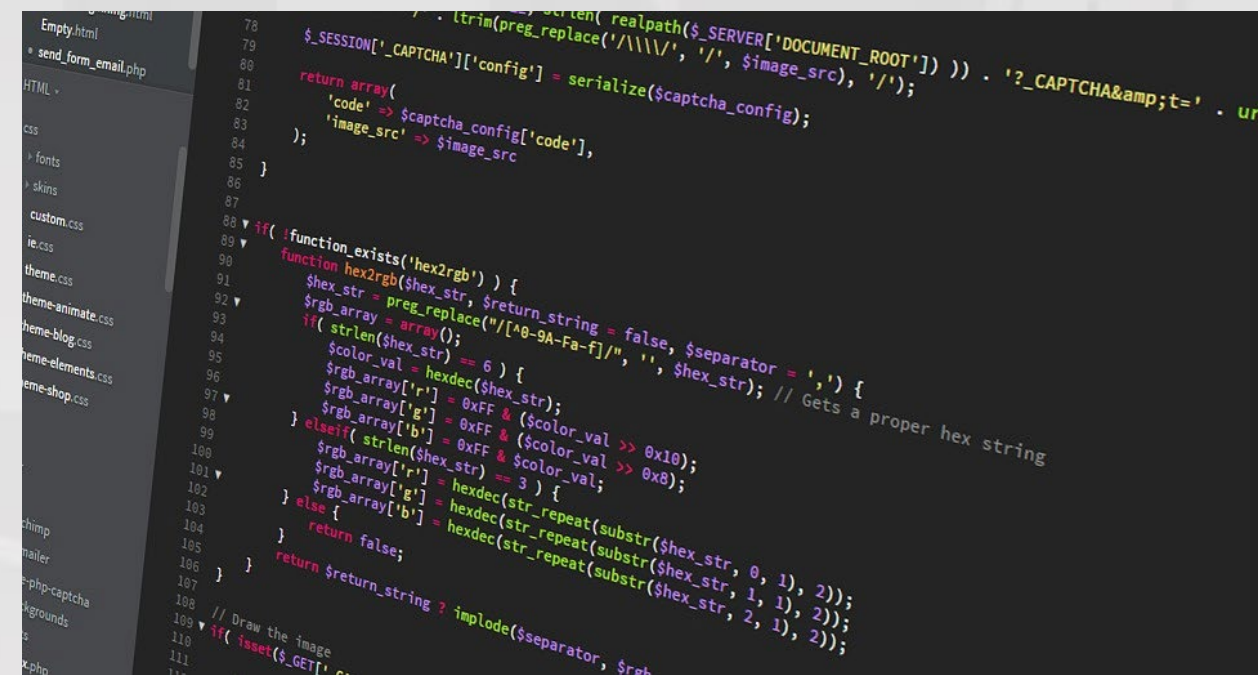
Class Schedule

5:00-6:30 PM

• Review of the CSS Box Model properties

6:30-6:40 PM

• Break

6:40-8:00 PM

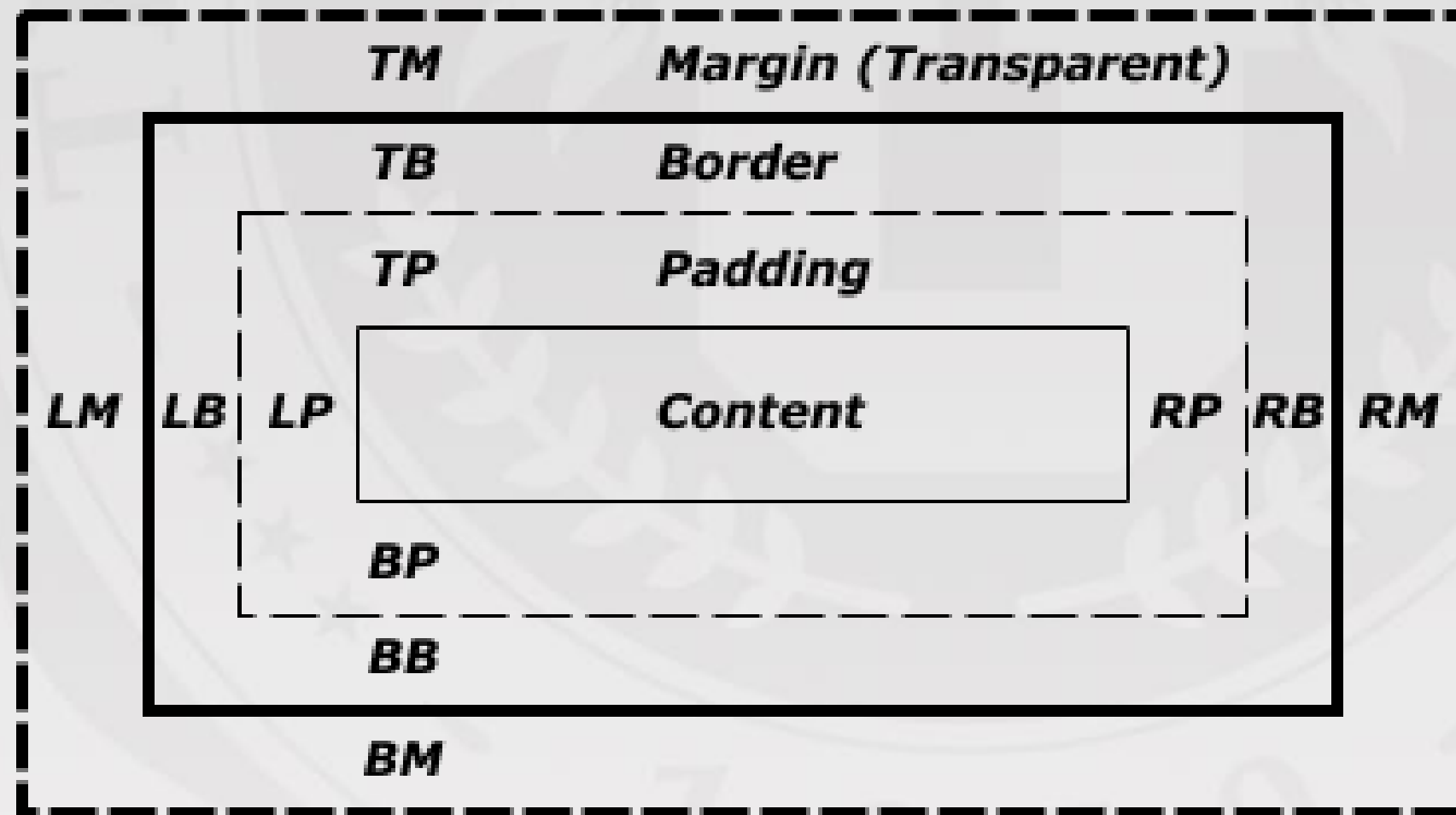• Getting started with Illustrator

Review of CSS Box Model Properties

	TM	Margin (Transparent)
	TB	Border
	TP	Padding
LM LB LP	Content	RP RB RM
	BP	
	BB	
	BM	

- – – – Margin edge
- ——— Border edge
- – – – Padding edge
- ——— Content edge

Margin

Margin

• The whitespace that surrounds the area between the border and other external elements within the HTML document (outside the box).

Ex: margin: 1px 2px 3px 4px; (i.e., top is 1px; right is 2px; bottom is 3px; left is 4px)

Additional variations include: margin-top, margin-right, margin-left, and margin-bottom.

All the margin properties are assigned the following values:

- auto (browser calculates the margin, i.e., 0 for top and bottom, 50% for left and right OR 100% of the space if the opposite property is set to a value)

- length (in px, pt, cm)

- % (a margin in % of the width of the containing element)

- Inherit (same margin as parent element)

Use the margin property to auto to horizontally center an element within its container – the remaining space is split evenly between the left and right margins.

The top and bottom margin are collapsed – the total space is equal to the largest of both margins, as opposed to left and right margins, which are summed together.

Boarder

Border

• The line that surrounds the box and divides the padding area from the margin area. It allows you to specify the style, width, and color.

Ex: border: 1px solid black;

- border-width (width set in px, pt, cm, em or by using a name value such as thin, medium, thick)

- border-style (what kind of border to display, either dotted, solid, dashed, double, and so on)

- border-color (color set by name, Hex, RGB, or transparent, e.g., red, #ff0000, rgb(255,0,0), transparent)

You can customize specific sides such as border-top-style, border-right-style, and so on. Alternatively, you can set the border-style property to four separate values such as dotted solid double dashed. This is similar to border-left property with values set to 6px solid red, for instance.

Set the border-radius property to a specific value, in px or %.

Padding

Padding

• The whitespace that surrounds the area between the content and the border of the box (inside the box).

Ex: padding: 1px 2px 3px 4px; (top is 1px; right is 2px; bottom is 3px; left is 4px)

Additional variations include padding-top, padding-right, padding-bottom, and padding-left).

All the padding properties are assigned the following values:

-   length (in px, pt, cm)

-   % (a padding in % of the width of the containing element)

-   inherit (same padding as parent element)

Width and Height

Width and Height

• The width and height of the content of the element.

Ex: width: 100px;

The CSS width property specifies the width of the element's content area. The content area is the portion inside the padding, border, and margin of an element. If an element has a specified width, the padding added to that element will be added to the total width of the element.

For example, a div element given a width of 300px will actually be rendered as a width of 350px (300px + 25px of left padding + 25px of right padding).

This is calculated as:

- Total width = width + left padding + right padding + left border + right border + left margin + right margin

- Total height = height + top padding + bottom padding + top border + bottom border + top margin + bottom margin

Use the box-sizing property to ensure the element maintains its width. Set the value of the box-sizing property to border-box. The value content-box is the default.

Use the max-width property to ensure the responsiveness of elements.

Display

Display

• One of the most important property for controlling layout. It specifies how the content should be displayed.

Ex: display: block;

- block (starts on a new line and takes up the full width available, typical elements include div, h1, p, form, and so on)

- inline (does not start on a new line and only takes up as much width as necessary, including span, a, and img tags. Useful for creating horizontal menus by switching li items as display inline)

- inline-block (behaves similar to an inline element, however, you have access to the margin-top and margin-bottom properties)

- none (hide and show elements without deleting them or recreating them. The page will be displayed as if the element is not there, contrary to the visibility property, which maintains the space of the non visible element.)

Overflow

Overflow

• The overflow property specifies whether to clip content or add scrollbars when the content of an element is too big to fit within a specified area.

Ex: overflow: visible;

- visible (default. The overflow is not clipped. It renders outside the element's box)

- hidden (The overflow is clipped, and the rest of the content is invisible)

- scroll (The overflow is clipped, but a scrollbar is added to see the rest of the content)

Horizontal Alignment

Float

The float property can also be used for positioning and formatting content.

 Ex: float: none;

- none (default. The element does not float (will be displayed just where it occurs in the text)

- left (The element floats to the left of its container)

- right (The element floats to the right of its container)

Horizontal Alignment

Horizontal Alignment

Single block level element

• Center aligning block elements such as ***div*** containers has no effect if the width property is not set (or set to 100%):

Ex: margin: auto; width: 50%;

Multiple block level elements

• Convert the elements to inline-block using the display property and text-align center property at the parent element:

Parent element - text-align: center;

Children element – display: inline-block;

Horizontal Alignment

Horizontal Alignment

Inline element

• Besides converting the display property, you can set the parent element to text-align and center:

Parent element - text-align: center;

Activity #4: Advanced CSS and Positioning

- This assignment will be the last of two checks made to your website.

- Begin to finalize the positioning of elements in your CSS grid. Your CSS grid should be completed at this point.

- Inside each column, use the display property of the element in combination with the margin, padding, height, and width properties. If and when appropriate, rely on the text-align and float properties to horizontally align elements.

- If you have any questions, leave them in the comment section in Canvas. I might also ask you in the feedback to address remaining issues.

What will we be learning today?

By the end of today, you should be able to:

1. Identify elements of the Illustrator user interface and demonstrate knowledge of their functions

2. Demonstrate knowledge of layers

3. Demonstrate knowledge of how to modify and transform objects

4. Demonstrate knowledge of how to use drawing tools

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Application bar

Control panel

Workspace
dropdown menu

Tools panel

Panels

Document
window

Status bar
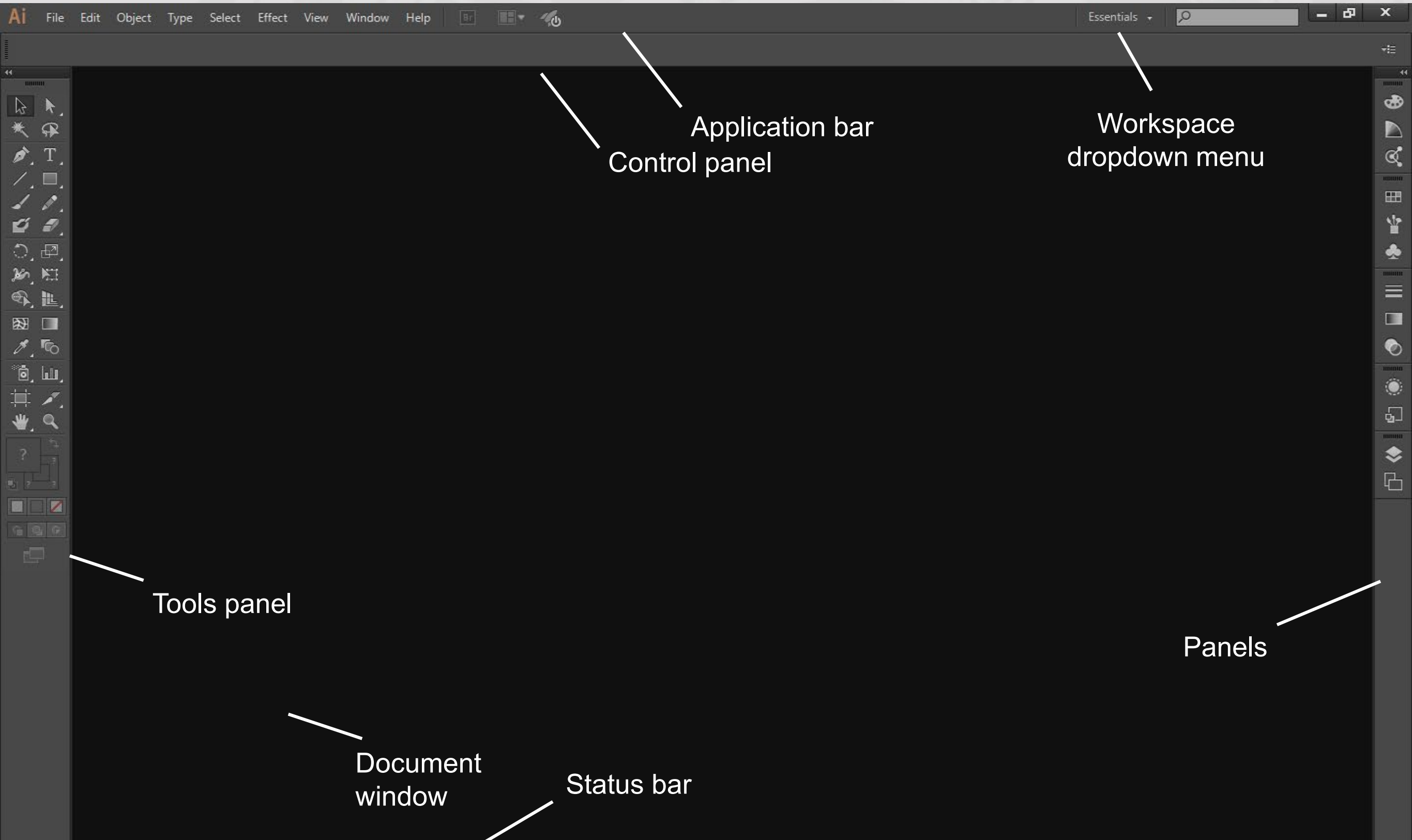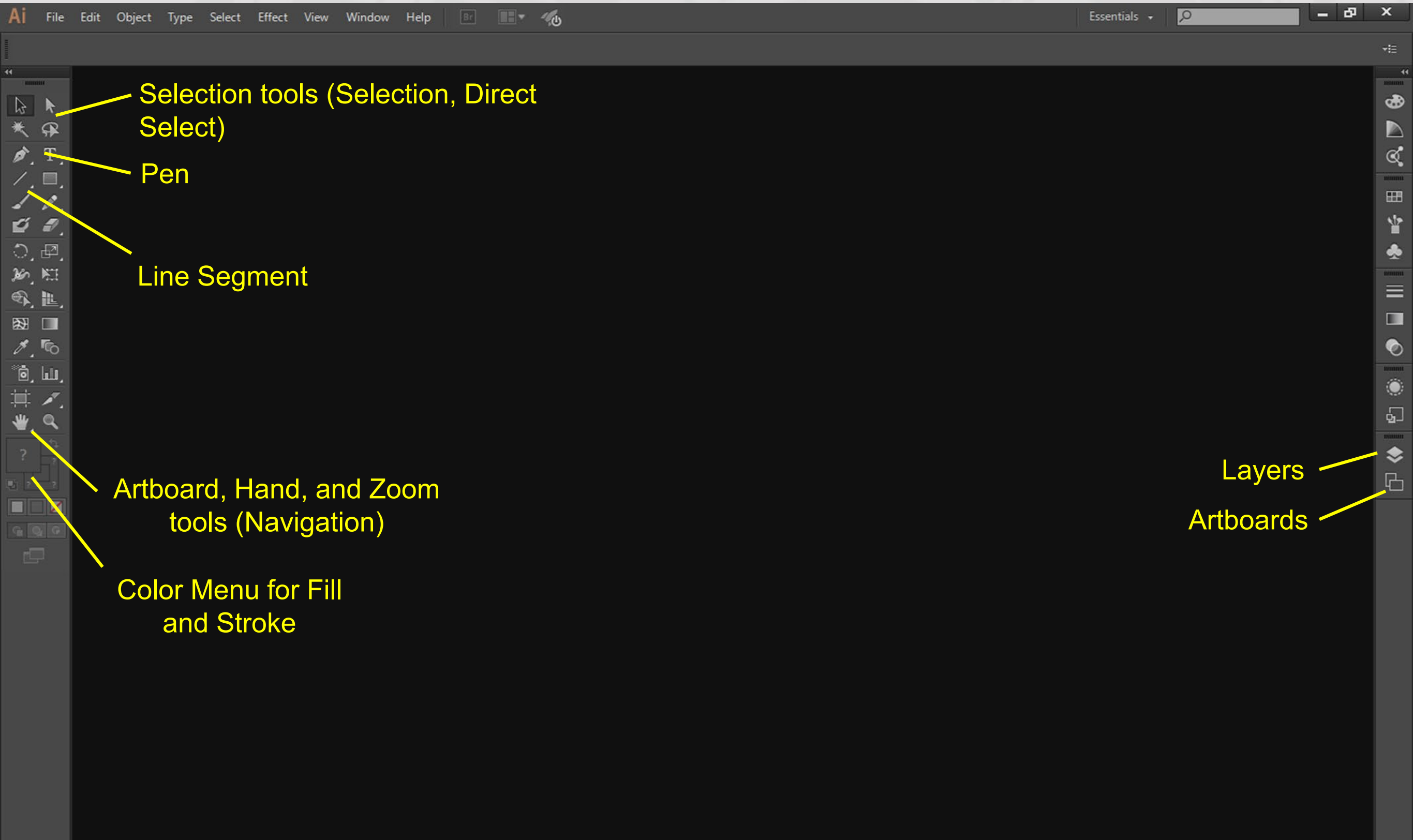
Creating a new document in Ai
1. Choose *Window > Workspace > Reset Essentials*
2. Choose *File > New*
3. In New Document dialog box, change the following options:
    1. Name: **HiFiPrototype**
    2. Number of Artboards: **1**
    3. Width: 1024 px
    4. Height: 627 px
    5. In Advanced Settings, Raster Effects should be set to 72 pixels per inch area
4. Click OK. A new document appears.
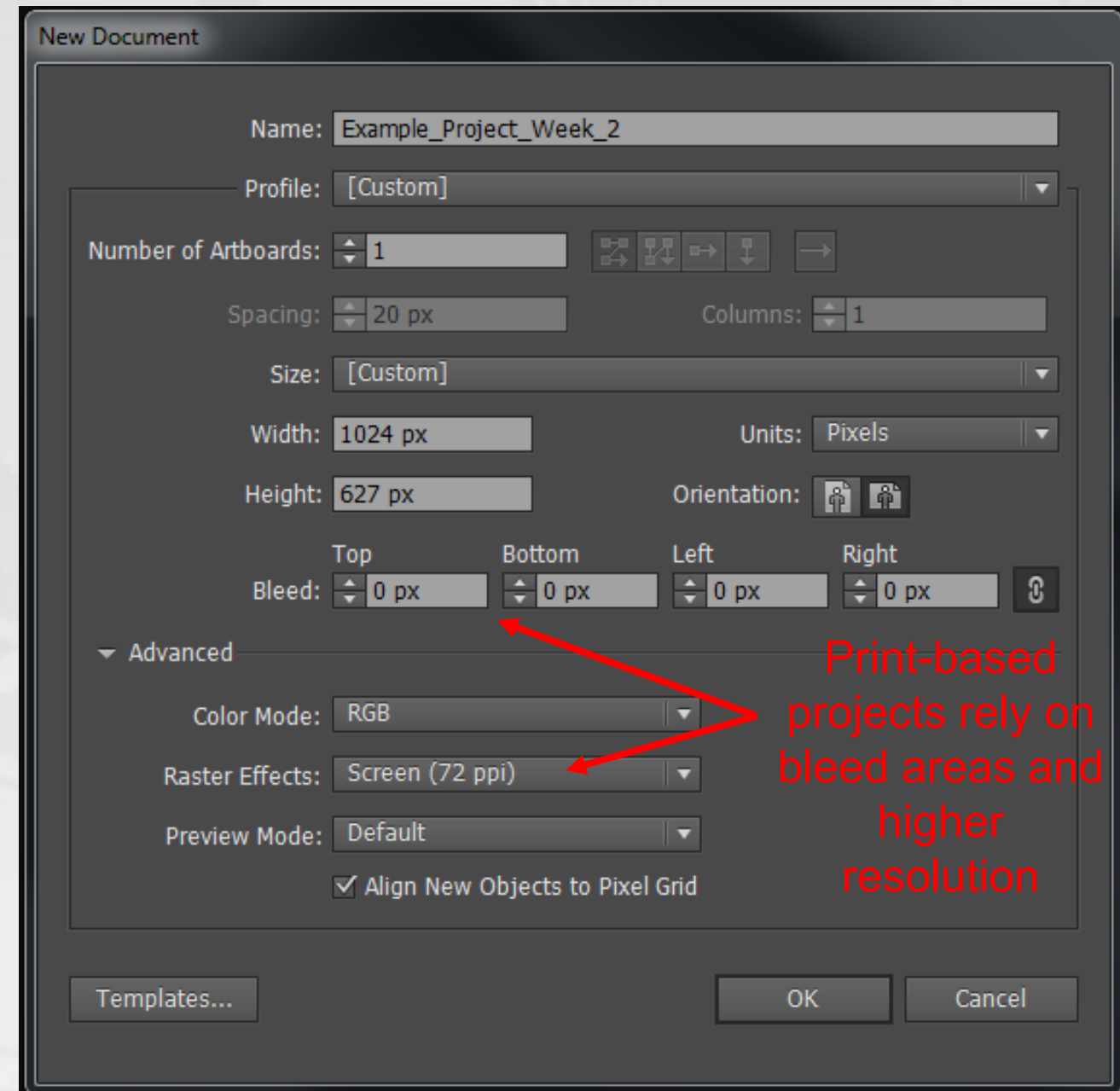
How to navigate the workspace in Ai

To navigate the workspace in Ai, try the following methods:

- Using the hand and zoom tools in the Tool panel
- Using the zoom, artboard dropdown menu, and scroll bar in the status bar area

Alternatively, to switch between the selection tools and the hand tool, press the spacebar.

Creating multiple artboards in Ai

1. We will be working with a second artboard

2. Select the artboard icon in the Panels menu

3. On the lower right side of the panel, select *New Artboard* icon
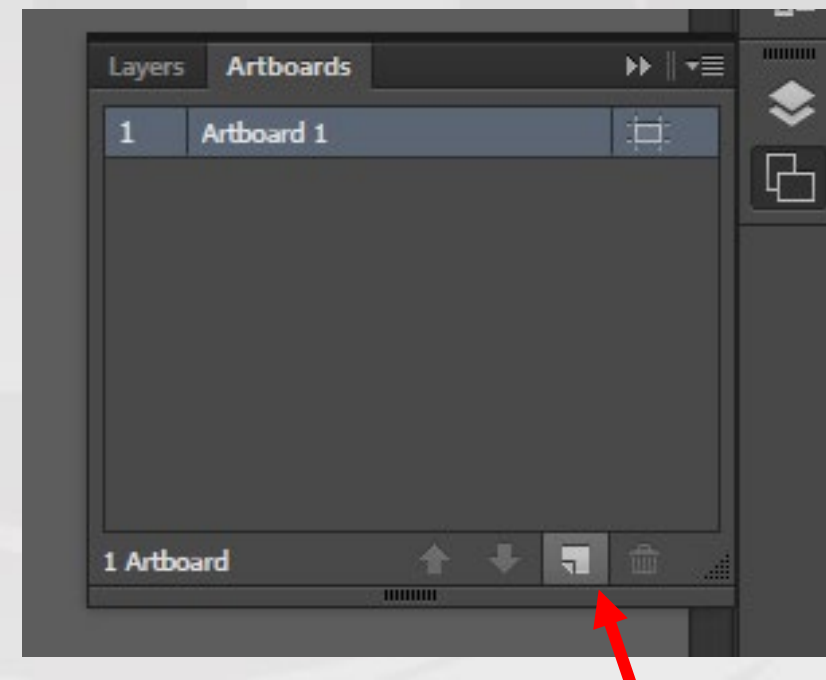
Scaling artboards

1. Select Artboard 2 in the Artboards panel.
2. Select the artboard tool.
3. Rename your artboard as "System Icon".
4. Resize the artboard to 64 x 64 px.
5. Hover the artboard tool cursor over the center of the artboard to select and move it to the desired location.
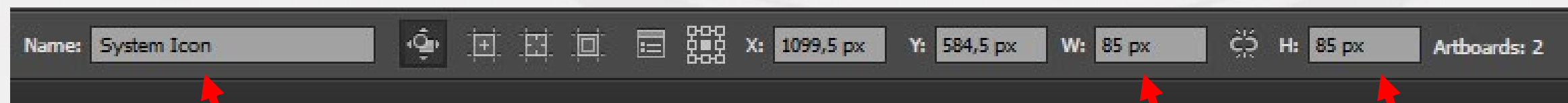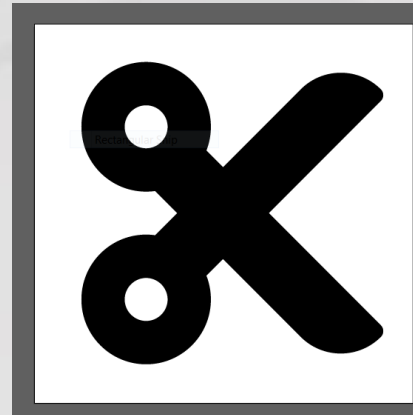
Placing images in layers and sublayers
1. Choose File > Place.
2. In the Place dialogue box, browse for the location of the media content files obtained from Canvas.
3. In order to embed the vectors (.svg files), make certain that the Link checkbox is *not* selected. These icons were obtained from the Bootstrap UI Kit and FontAwesome.io.
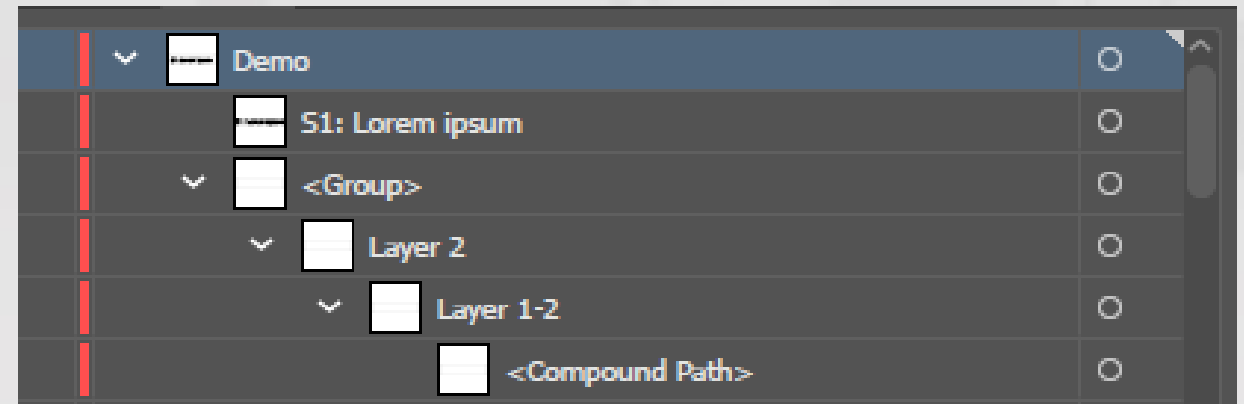4. Click on the artboard in order to embed the image.
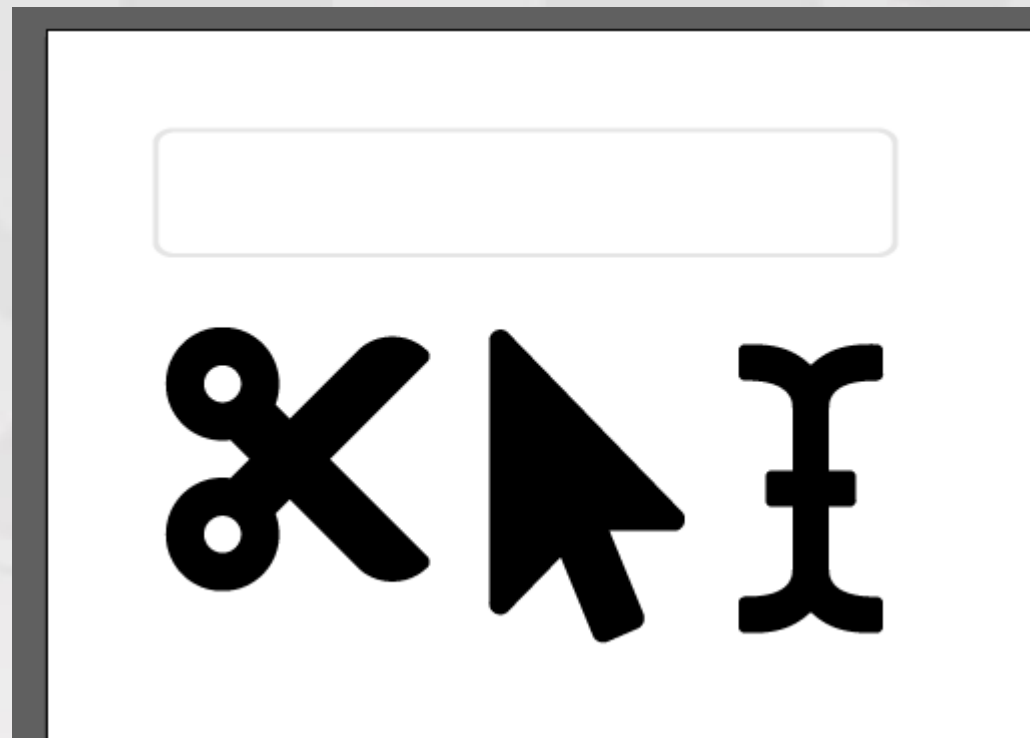
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Using the Type Tool
1. Select the type tool from the toolbar.
2. Double click the anchor on the textbox when working with multi-line text or to edit the textbox itself.
3.In the Control panel, choose an Arial font family and increase the font size to 16pt.
4.Write the following text: "S1: Lorem ipsum".

Grouping and aligning assets

1. Imported vectors usually have multiple layers associated with them. Select the "title" layer from the layers panel for the Card shape. Now delete that layer.

2. Alternatively, select the icon and choose Object > Compound Path > Make. This will join all of the vector file together, facilitating alignment on the Artboard.

3. SHIFT + Select the text and card shape.

4. In the control panel, choose Align to Selection. Select the Vertical and Horizontal Center Align icons.

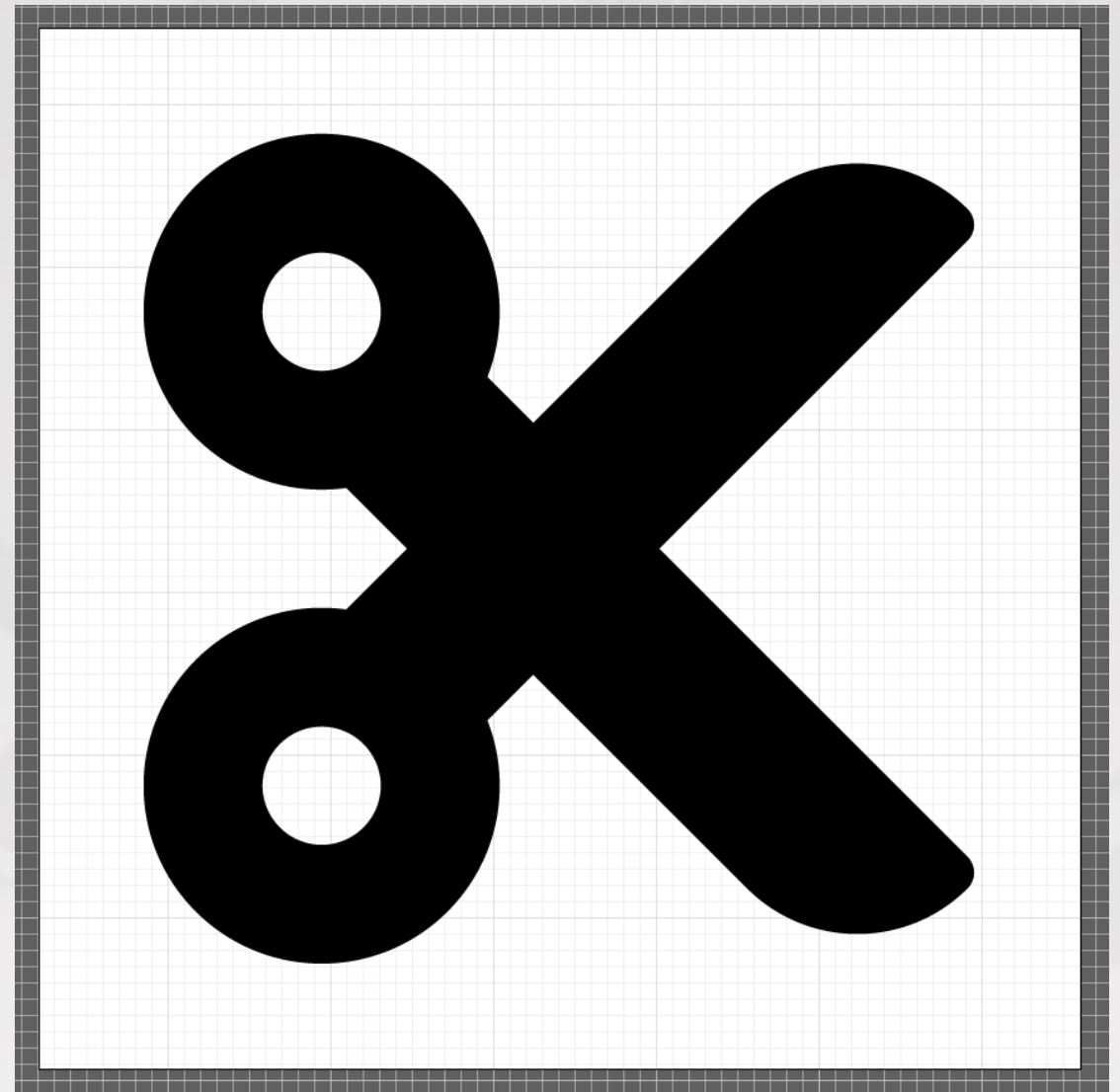5. Right click on the selection and choose Group. In the Layers panel, assign a new name "Talk_Turn_1".
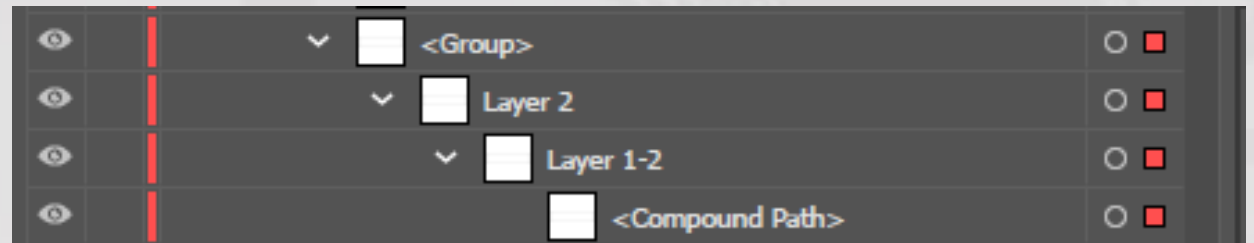
S1: Lorem ipsum

Using a Pixel Grid

1.Center align the icon both horizontally and vertically by selecting Artboard 2 and choosing Align to Artboard.

2. Choose View > Fit Artboard in Window.

3. Choose View > View Grid.

4. Then, deselect View > Snap to Grid to make more precise selections and movement. Make sure that Snap to pixel is selected.

5.In Edit > Preferences > Guides & Grid. Choose the following

6. Gridline every 10px;

7. Subdivisions: 10

8. Click on Ok.

Using the Selection vs. Direct Selection Tool

1. Using the Direct Selection tool, select the middle anchor point in the path. Select and drag the circle icon to create a curved line.

2. Drag the handle bars of a few of the anchor points to change the curvature of the line.

3. Whereas the group selection tool allows you to edit properties of the whole shape, the direct selection tool allows you to edit the path of each line using anchor points.
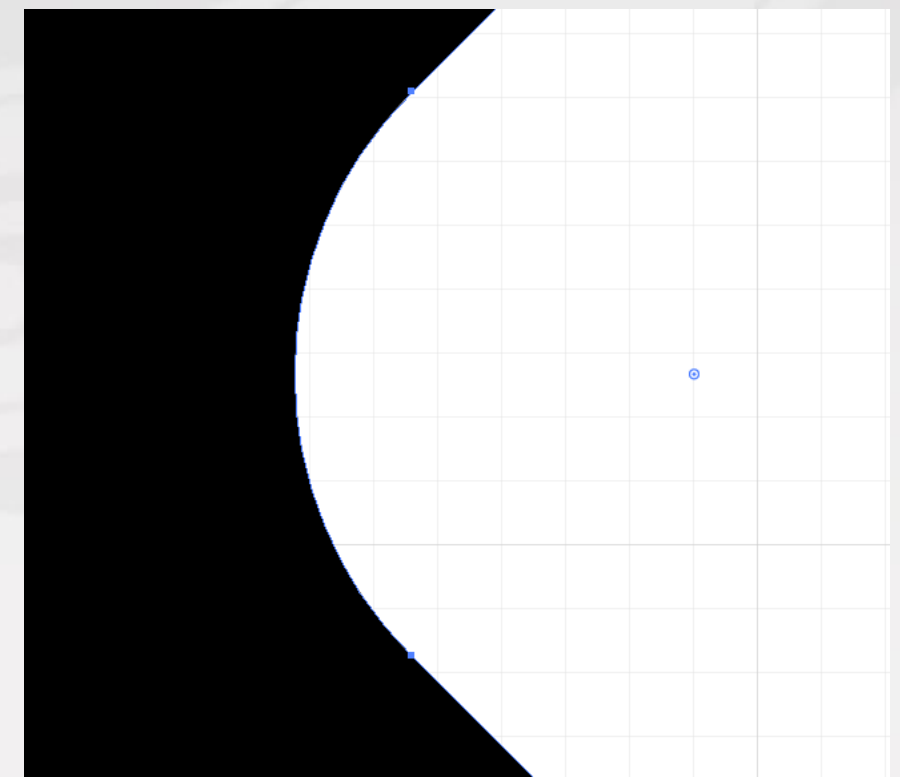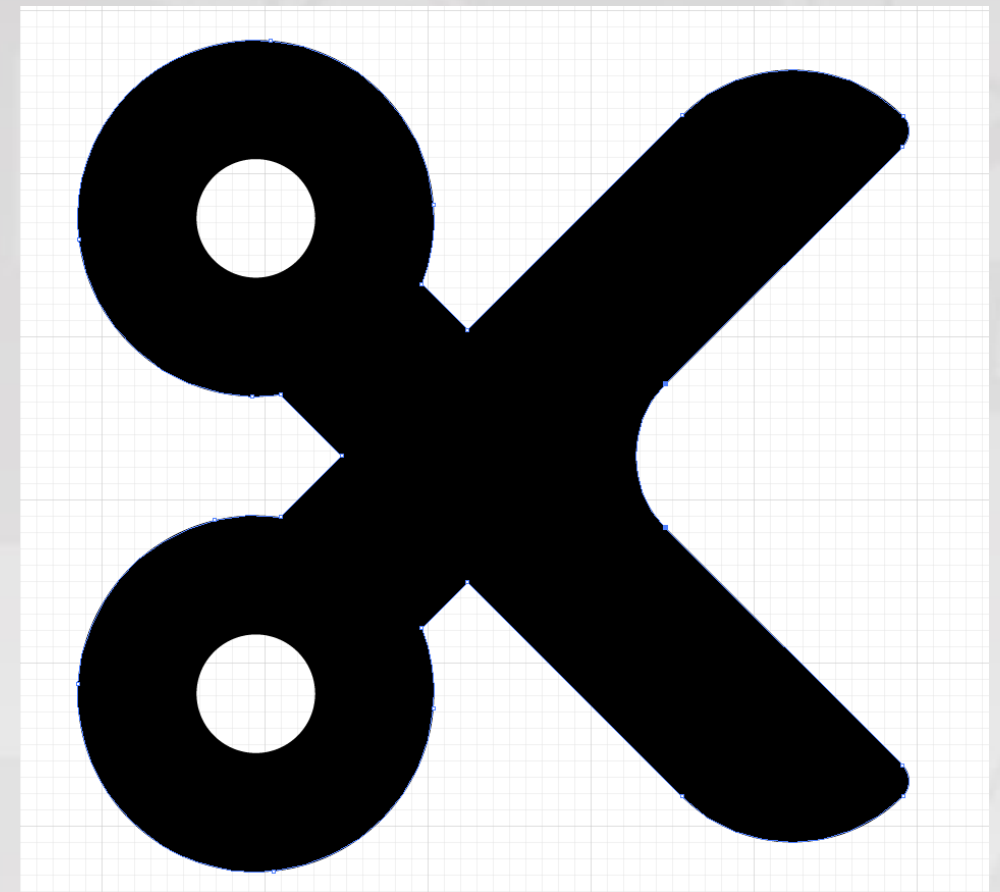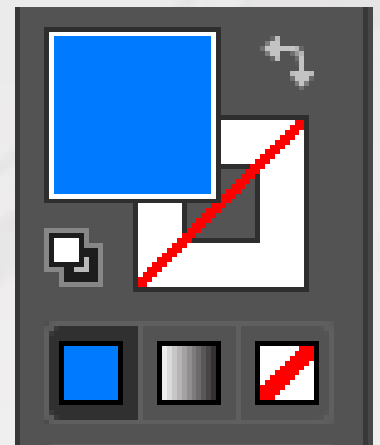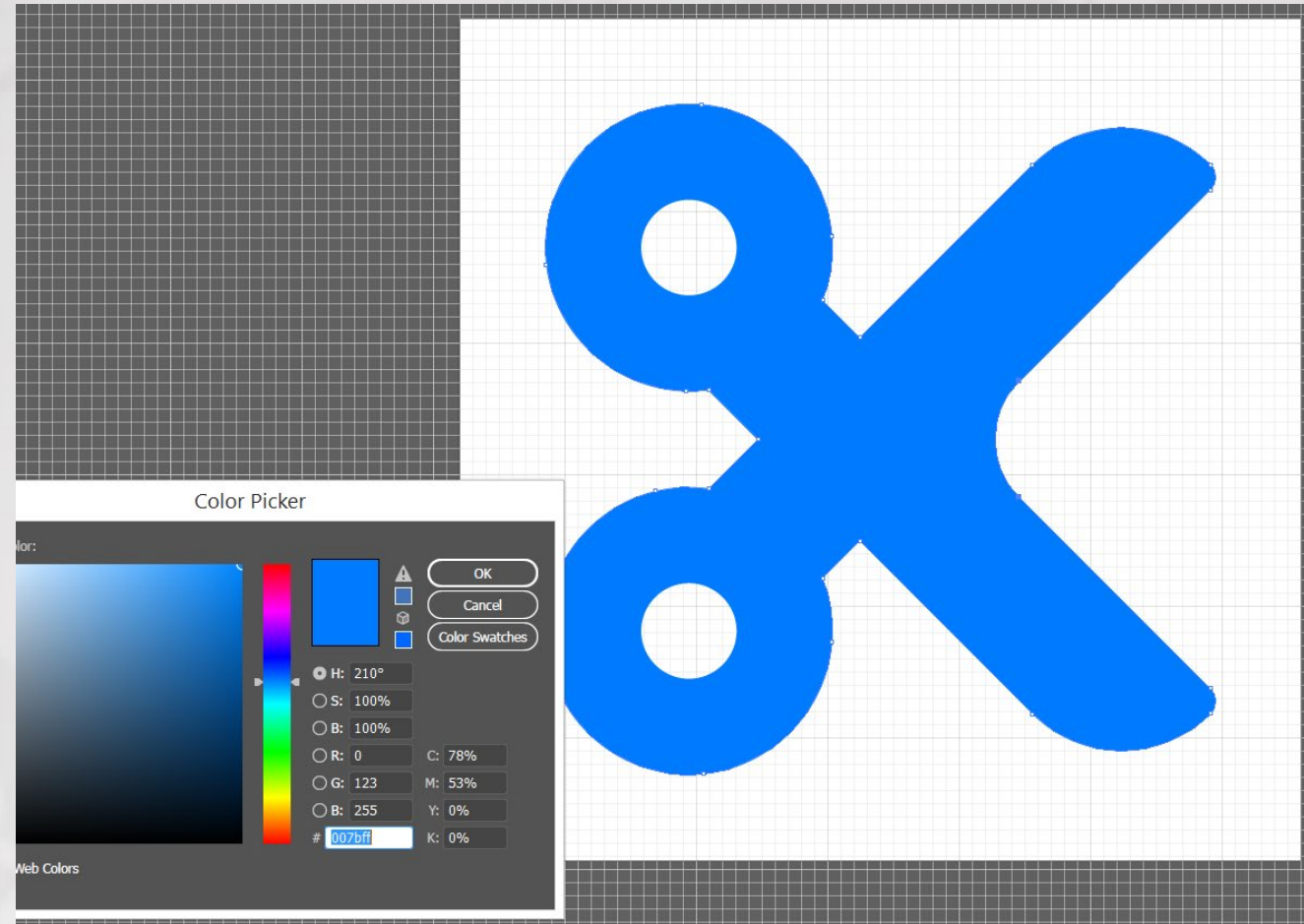
Assign Color to Fill and Path
1. Assign a blue color (color of #007bff) to the fill of the shape.
2. Add a stroke of 2 pt width. Choose Round join corners for the path.
3. Select the icon. Choose Object > Artboards > Fit to Select Art.

Where to Find Vector Assets?

UI Kits

- Bootstrap 4

- PSD.co

- Freebies

Assets

- Publicdomainvectors.org

- Pixabay

- Clker.com

- i2Clipart

- Openclipart

- Flaticon