

Process & Production

Demonstration & Discussion

Adobe Illustrator

Frame Animation

Animation & Frames

Illustrator

Paste on All Artboards

Export for Screens

Photoshop

Image Stack

Timeline Palette

Exporting Animated GIFs/Videos

Animation & Frames

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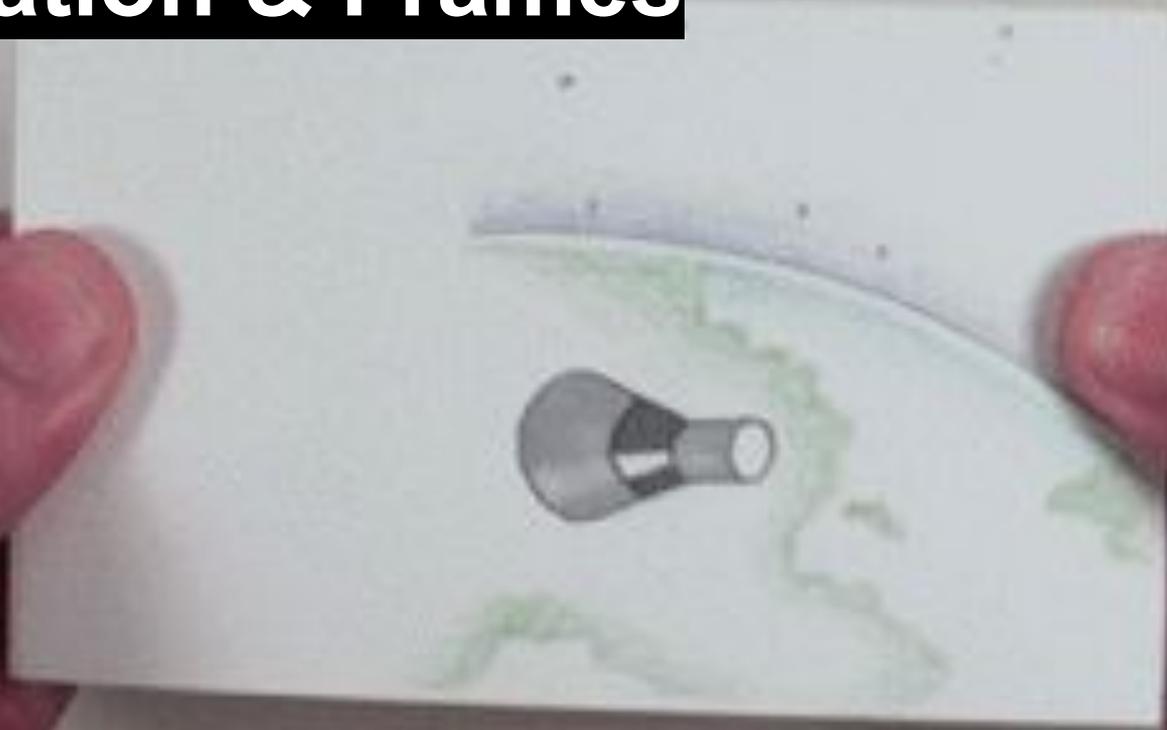
Exporting Animated GIFs/Videos

Animation & Frames

Animation & Frames

Fundamentally, all animation is simply the changing of **imagery** over a duration of **time**.

Animation & Frames



"Flipbook," IAMCORE, [imgur](https://imgur.com), Nov. 18 2014 [<https://media.giphy.com/media/13bLnxKfsueRPY/giphy.gif>]

Animation & Frames

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Animation & Frames

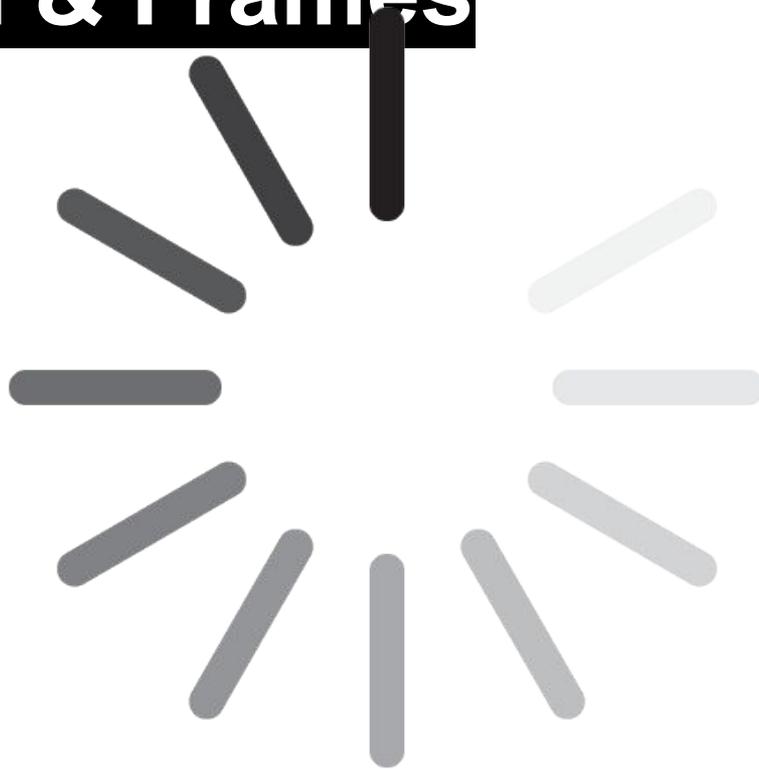
Fundamentally, all animation is simply the changing of imagery over a duration of time.

We know how to use multiple artboards and transforms (like rotate, scale, etc.) to generate consistent **imagery.**

Animation & Frames

For instance, consider this simple graphic for a **loading icon**...

Animation & Frames

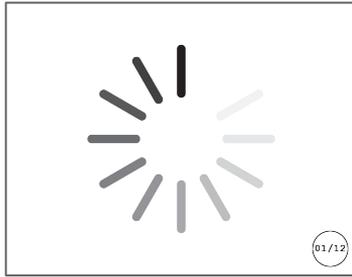


Animation & Frames

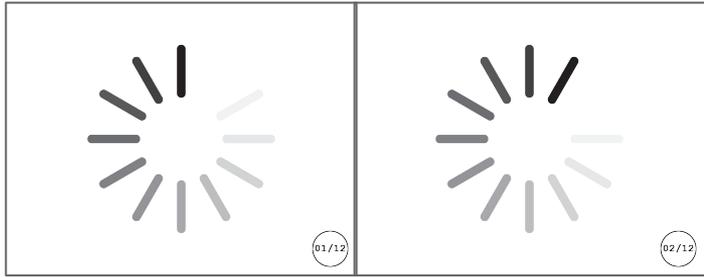
For instance, consider this simple graphic for a loading icon.

With some basic rotation transforms around the center, we can produce **multiple artboards** that start to suggest an animation sequence...

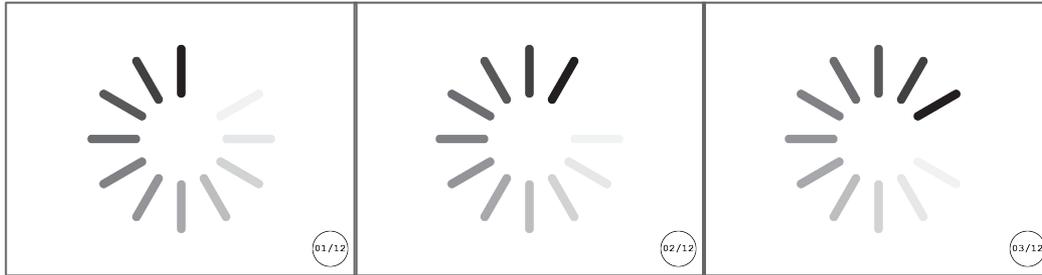
Animation & Frames



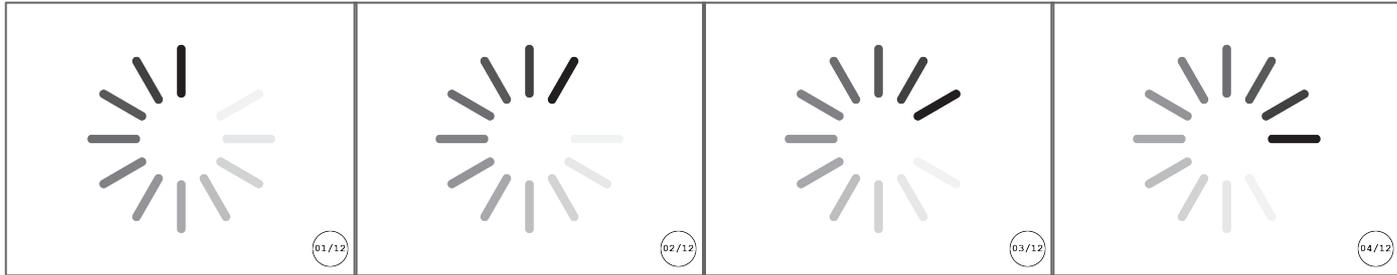
Animation & Frames



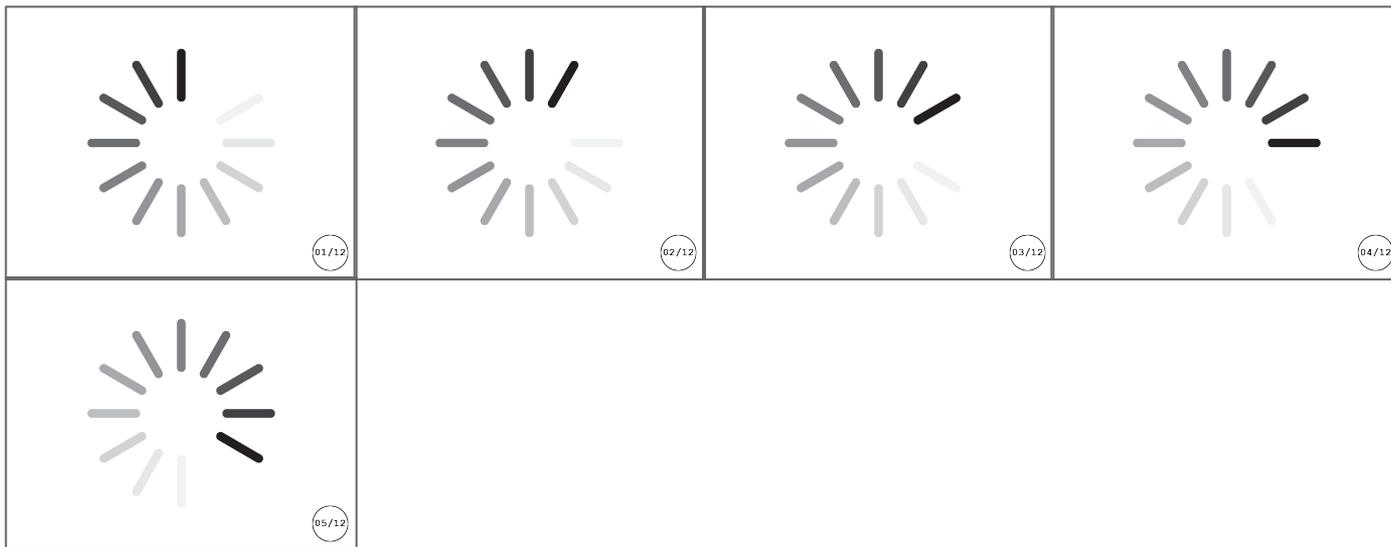
Animation & Frames



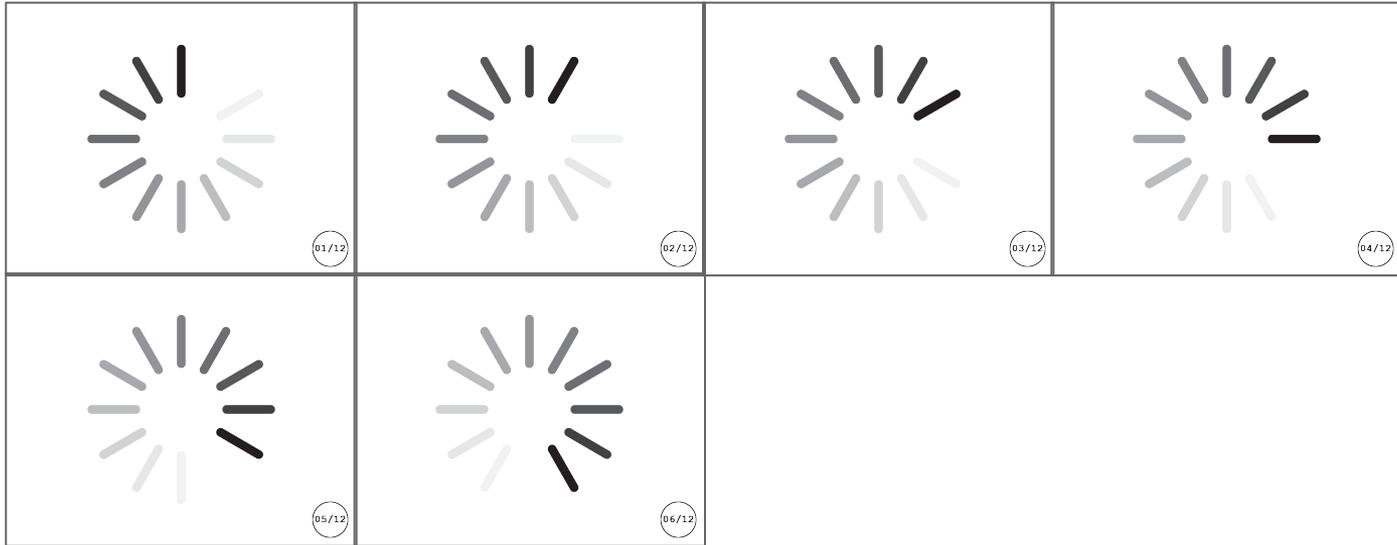
Animation & Frames



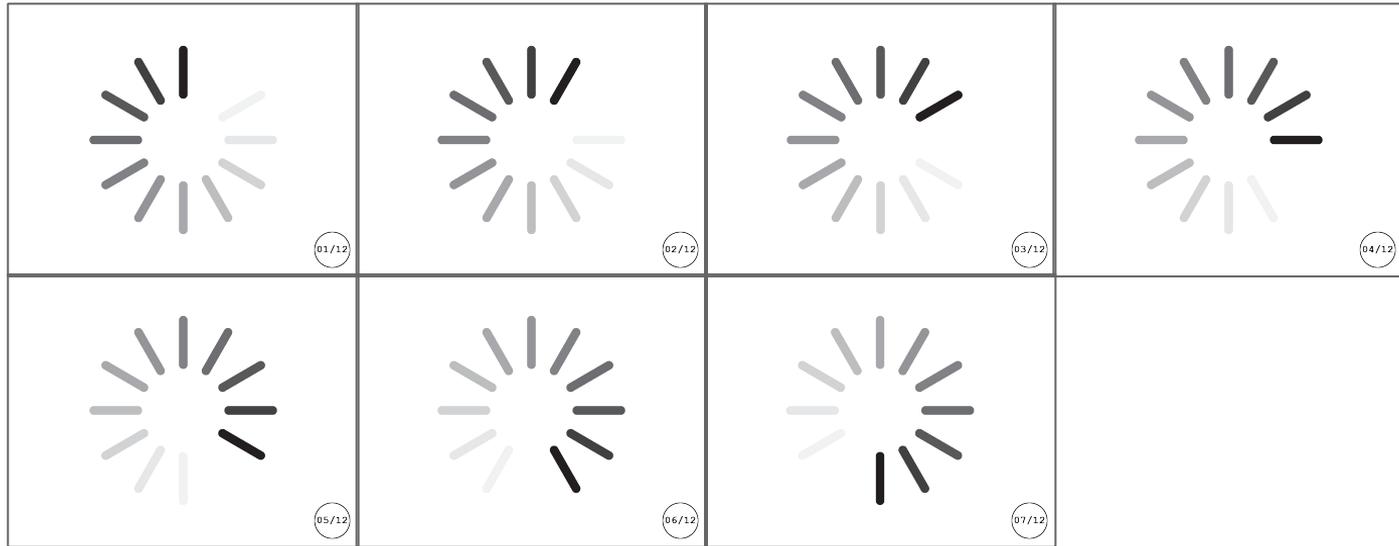
Animation & Frames



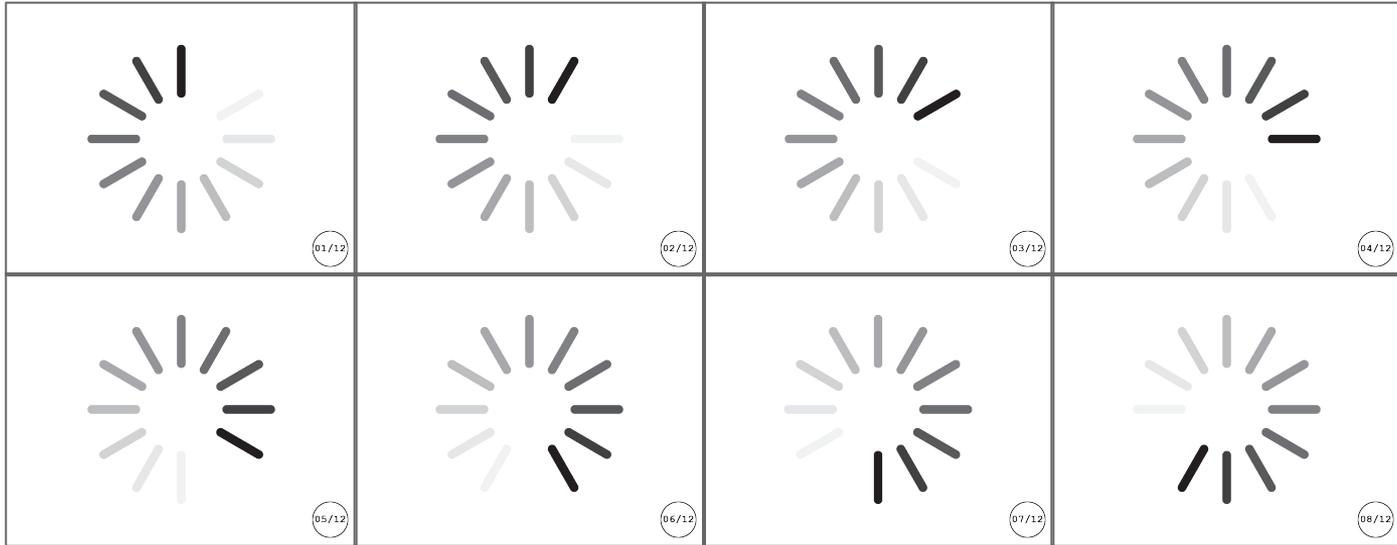
Animation & Frames



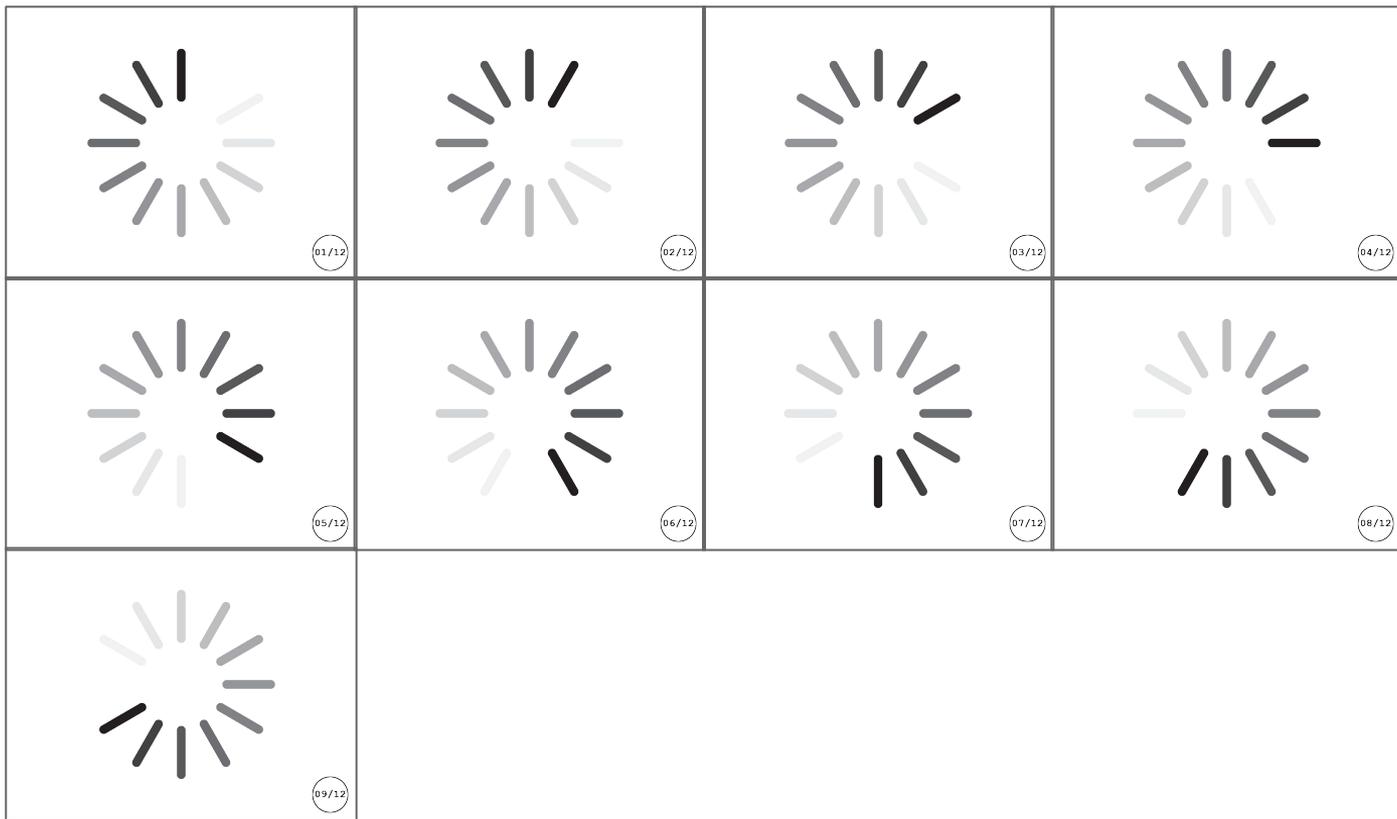
Animation & Frames



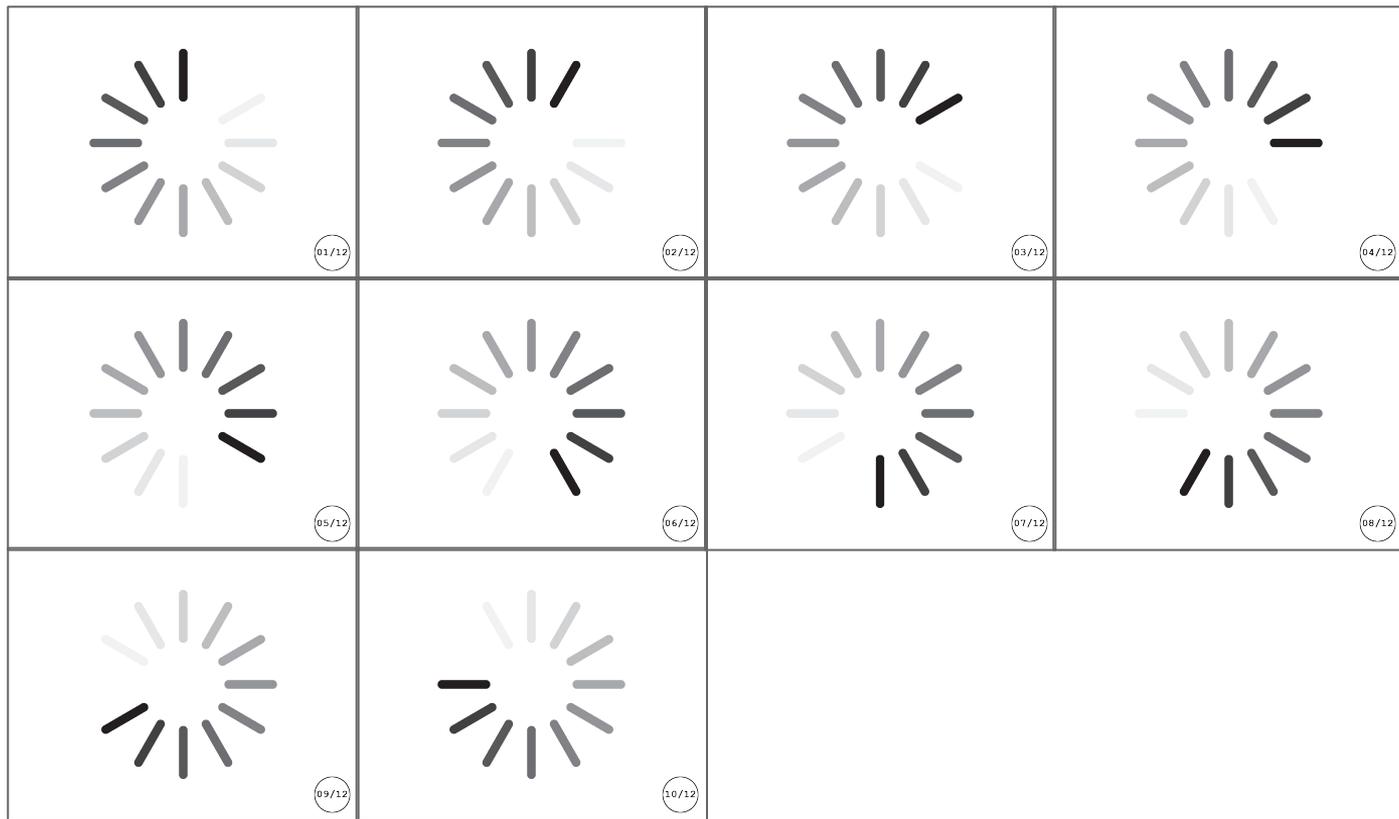
Animation & Frames



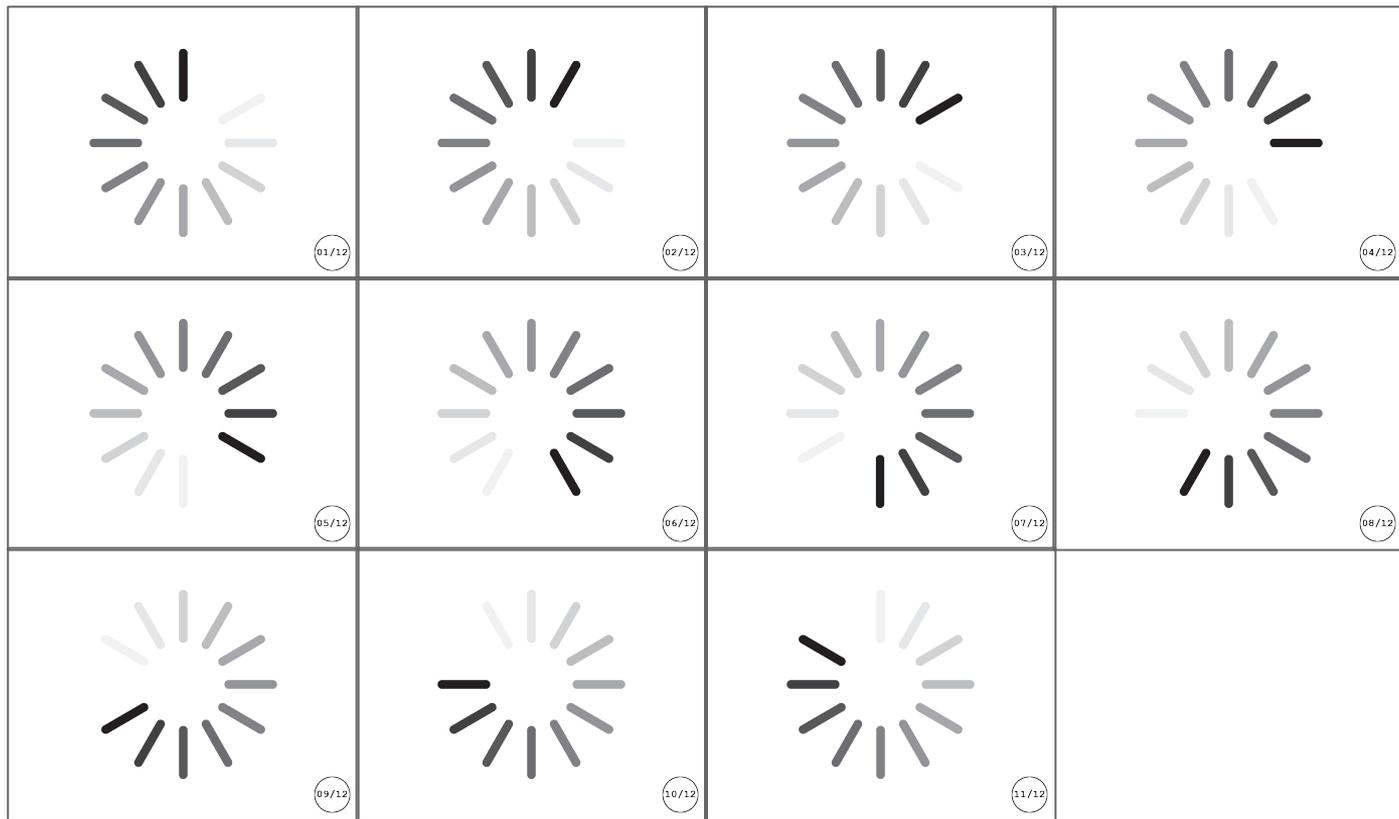
Animation & Frames



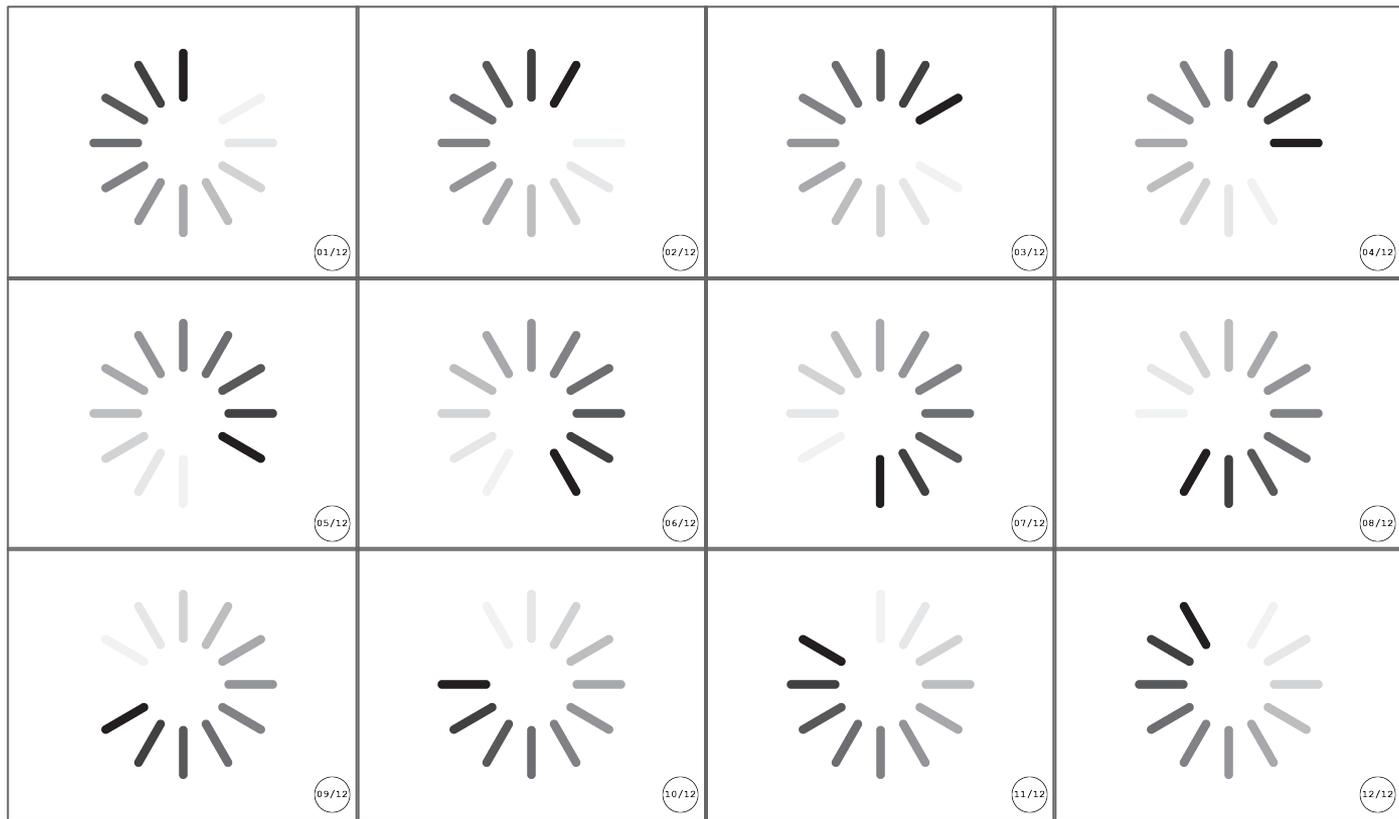
Animation & Frames



Animation & Frames



Animation & Frames



Animation & Frames

So we know how to use multiple artboards and transforms (like rotate, scale, etc.) to generate consistent imagery.

We just need a file format that can control **time**.

Animation & Frames



<https://www.how-to-design.org/process/files/class-example-files/spinning-loader-animation/spinning-loader-animation.gif>

Animation & Frames

Animation & Frames

The term **frame** refers to one piece of imagery displayed for one segment of time in an animation sequence.

Animation & Frames

Animation & Frames

The term **keyframe** derives from traditional animation...

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The term **keyframe** derives from traditional animation, where the lead animator would illustrate only certain important motion cues (“**keyframes**”), and assistant animators would complete the frames in between (“**tweens**”).

Animation & Frames



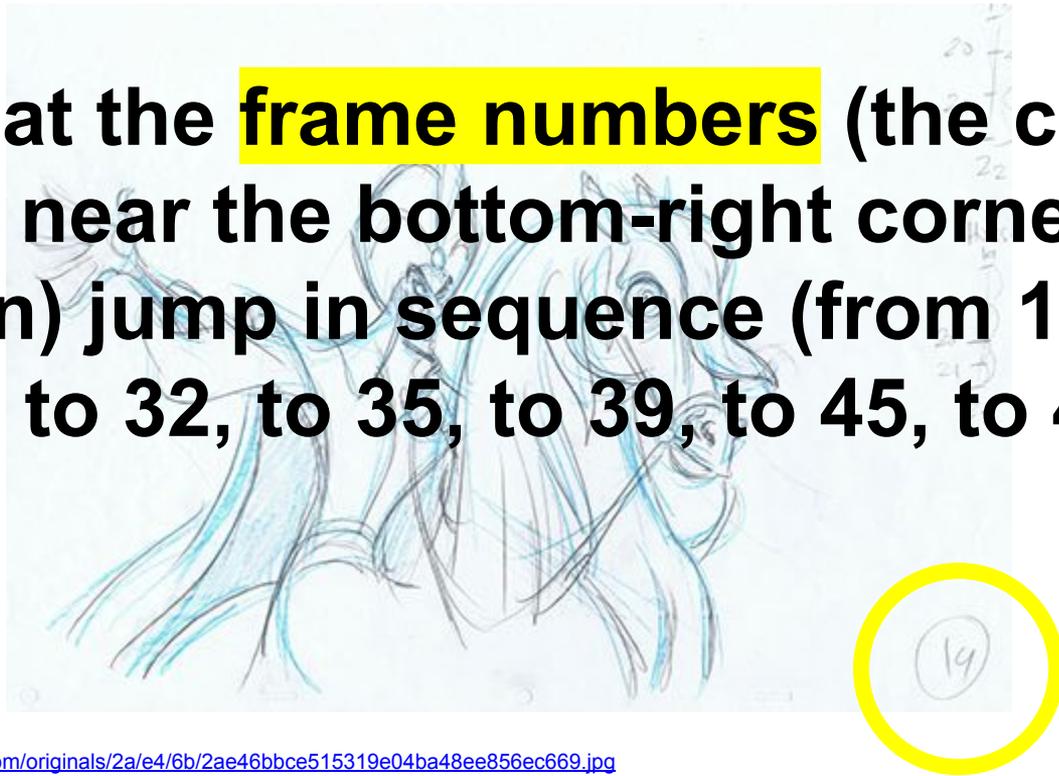
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21
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<https://s-media-cache-ak0.pinimg.com/originals/2a/e4/6b/2ae46bbce515319e04ba48ee856ec669.jpg>

19

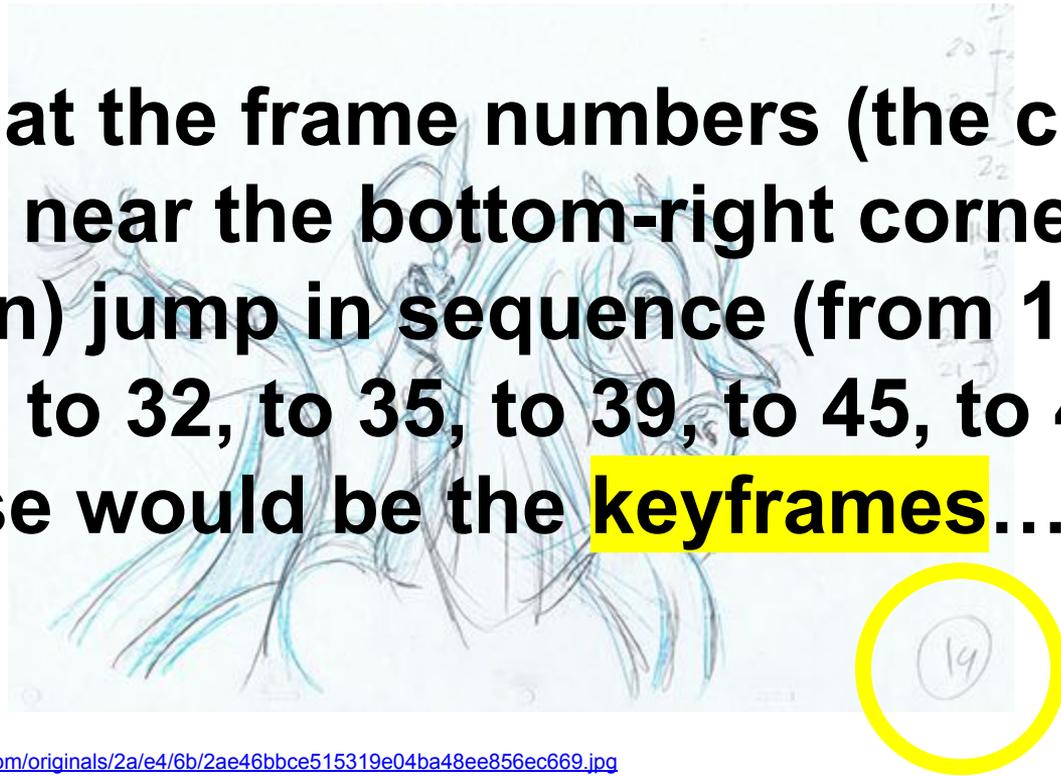
Animation & Frames

Notice that the **frame numbers** (the circled numbers near the bottom-right corner of the animation) jump in sequence (from 19, to 25, to 29, to 32, to 35, to 39, to 45, to 48, to 52).



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Animation & Frames

Notice that the frame numbers (the circled numbers near the bottom-right corner of the animation) jump in sequence (from 19, to 25, to 29, to 32, to 35, to 39, to 45, to 48, to 52). These would be the keyframes, and the assistant animator would be responsible for completing the **inbetweens** or **tweens** (all of the frames in between the keyframes).

Animation & Frames

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Paste on All Artboards

Paste on All Artboards

Once we've created the basic visual components for our animation sequence, use **Paste on All Artboards** to ensure that the art is consistently positioned throughout the animation sequence.

Paste on All Artboards



Illustrator CC

File

Edit

Object

Type

Select

Effect

View

Window

Help

Edit Menu

Undo

Redo

Cut

Copy

Paste

Paste in Front

Paste in Back

Paste in Place

Paste on All Artboards

Paste

Clear

...

Edit Menu

Undo
Redo

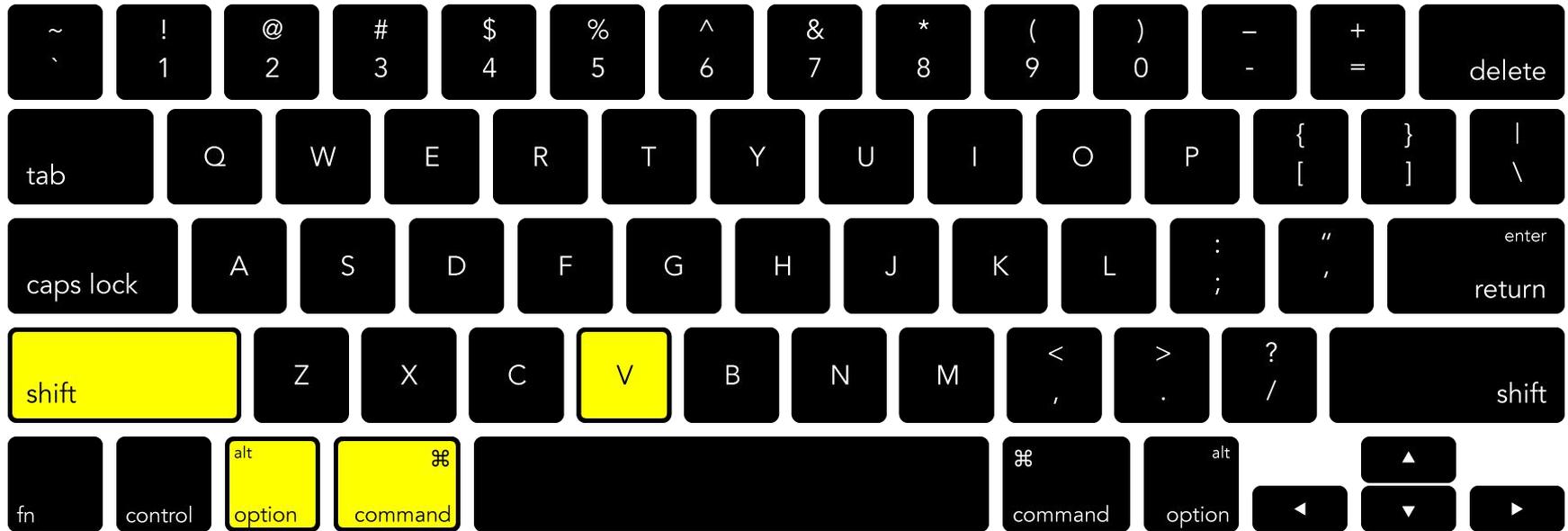
Cut
Copy
Paste
Paste in Front
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Paste in Place

Paste on All Artboards

Paste
Clear
...

Edit Menu → Paste on All Artboards

Paste on All Artboards



Edit Menu → Paste on All Artboards

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Export for Screens

Export for Screens

When you've finished designing each of your frames in Illustrator, use **Export for Screens** to quickly export all of the artboards out to individual PNG files.

Export for Screens



Illustrator CC

File

Edit

Object

Type

Select

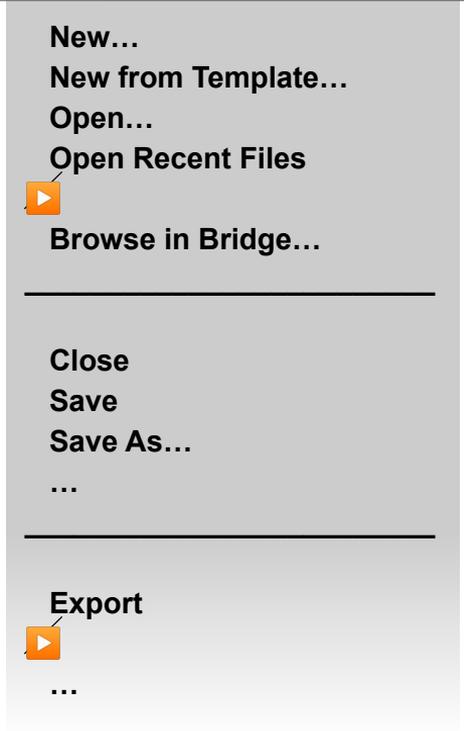
Effect

View

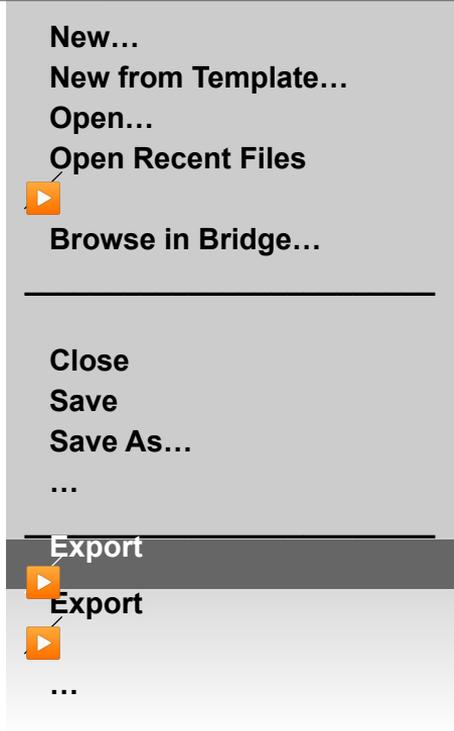
Window

Help

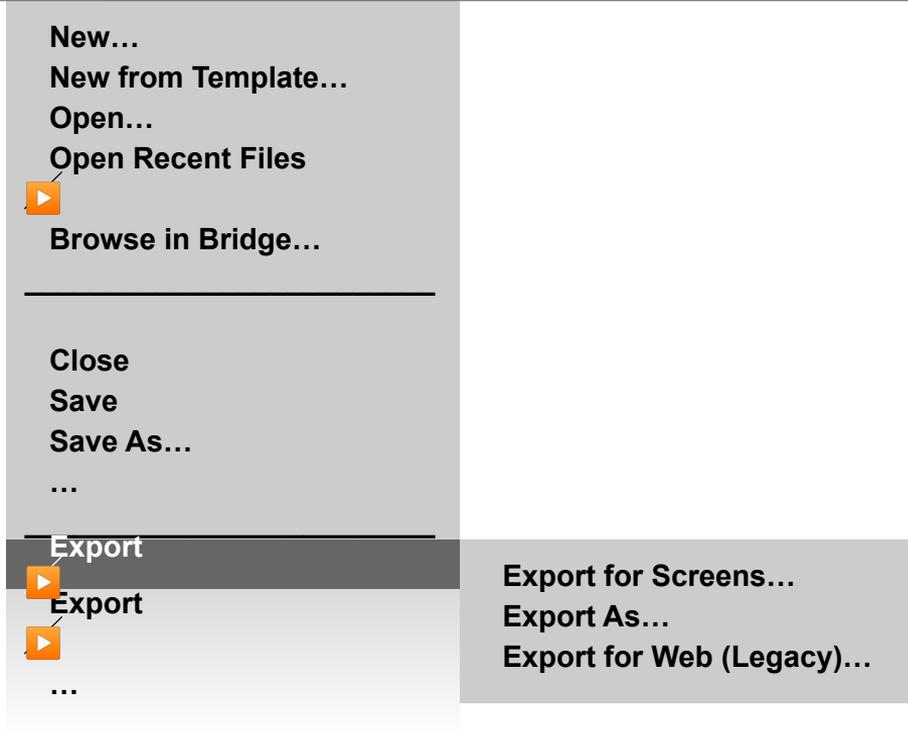
File Menu



File Menu



File Menu → Export

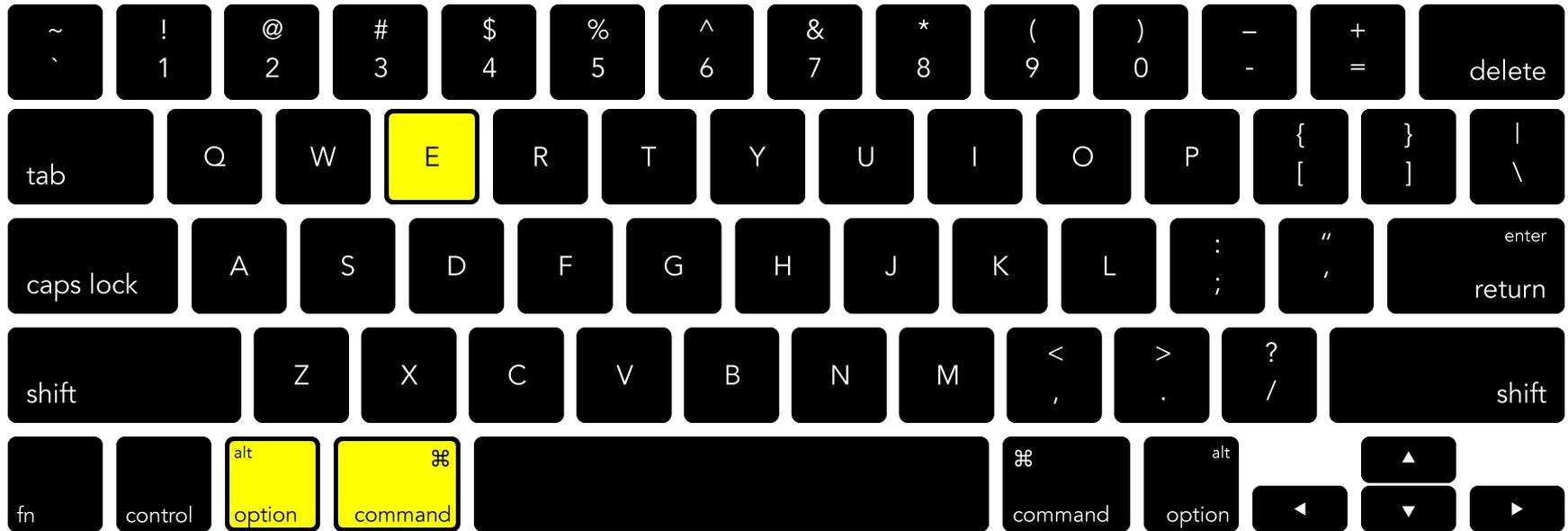


File Menu → Export →



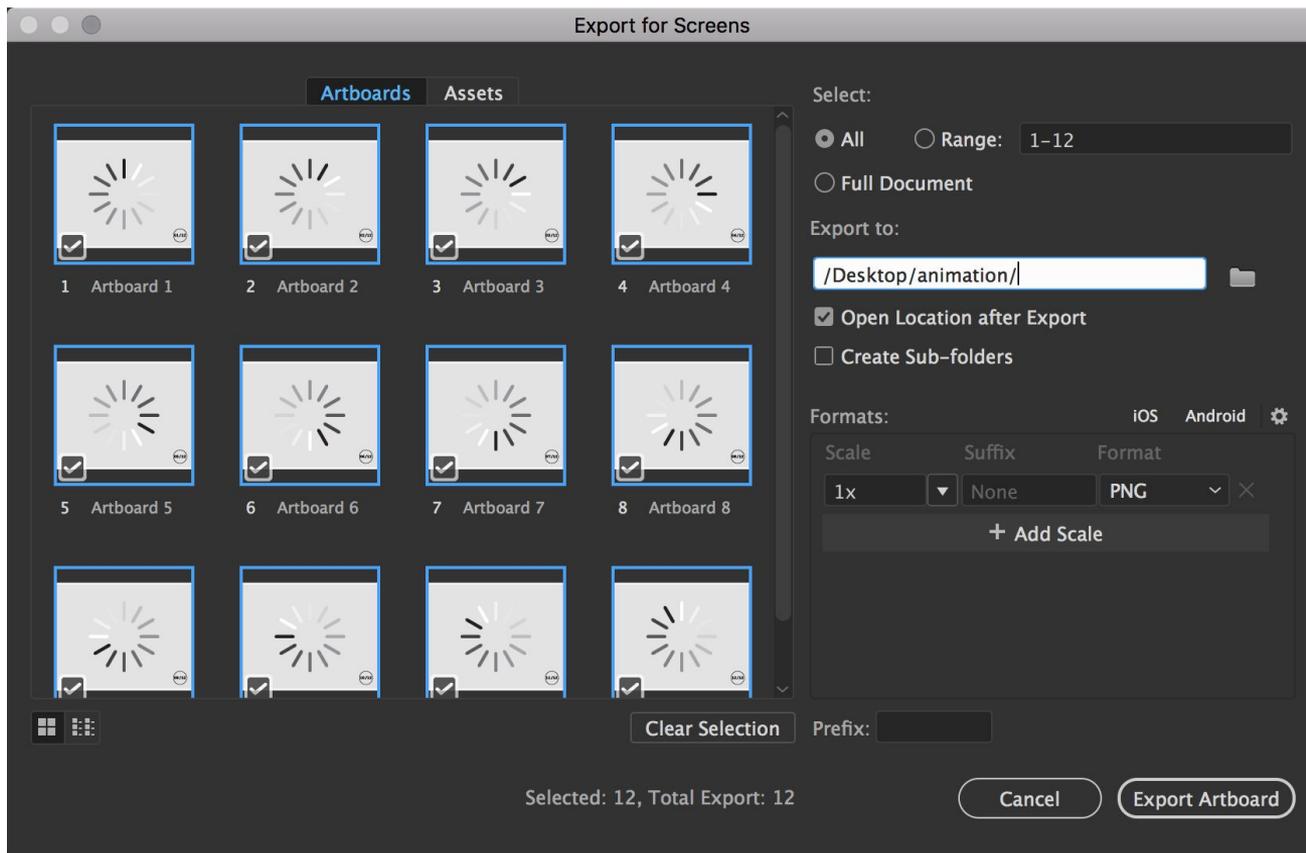
File Menu → Export → Export for Screens

Export for Screens

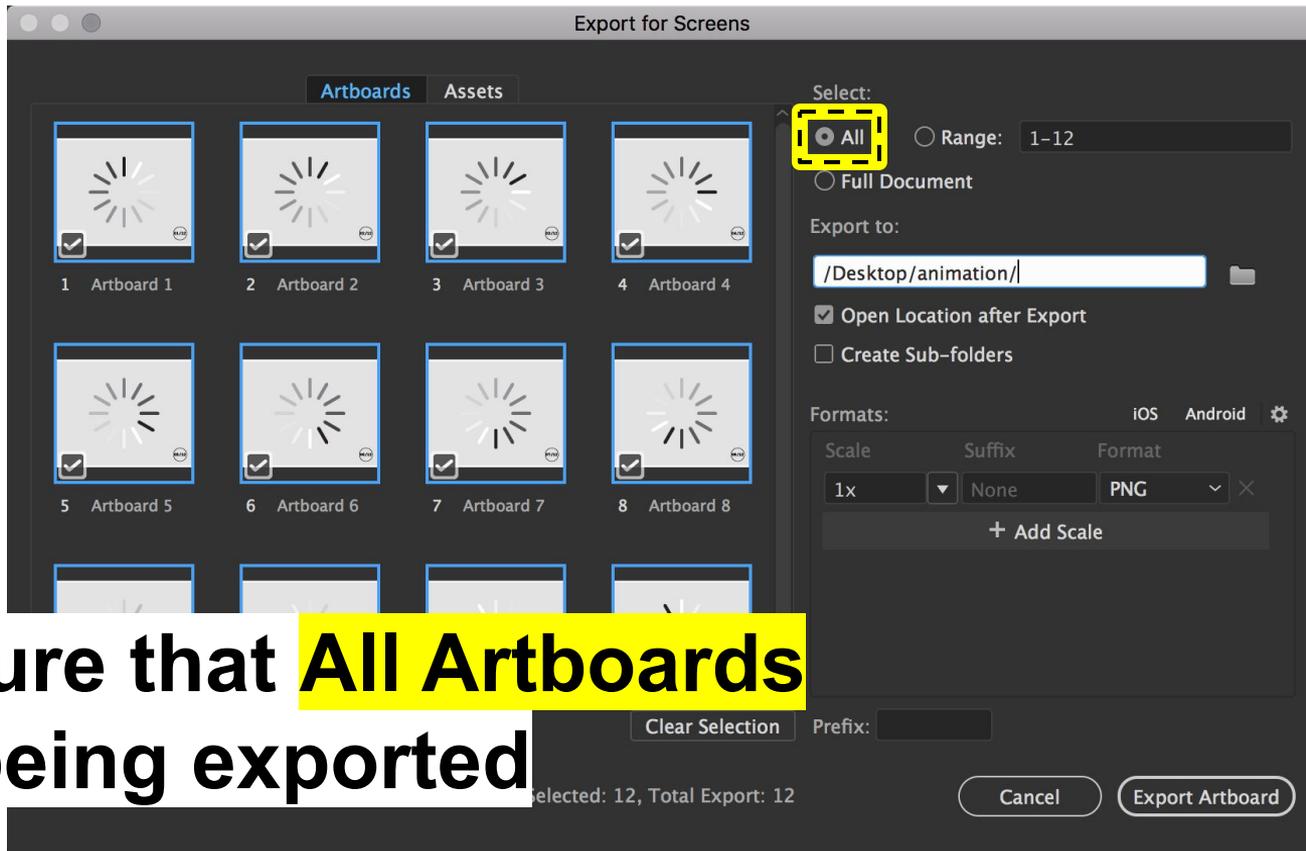


File Menu → Export → Export for Screens

Export for Screens

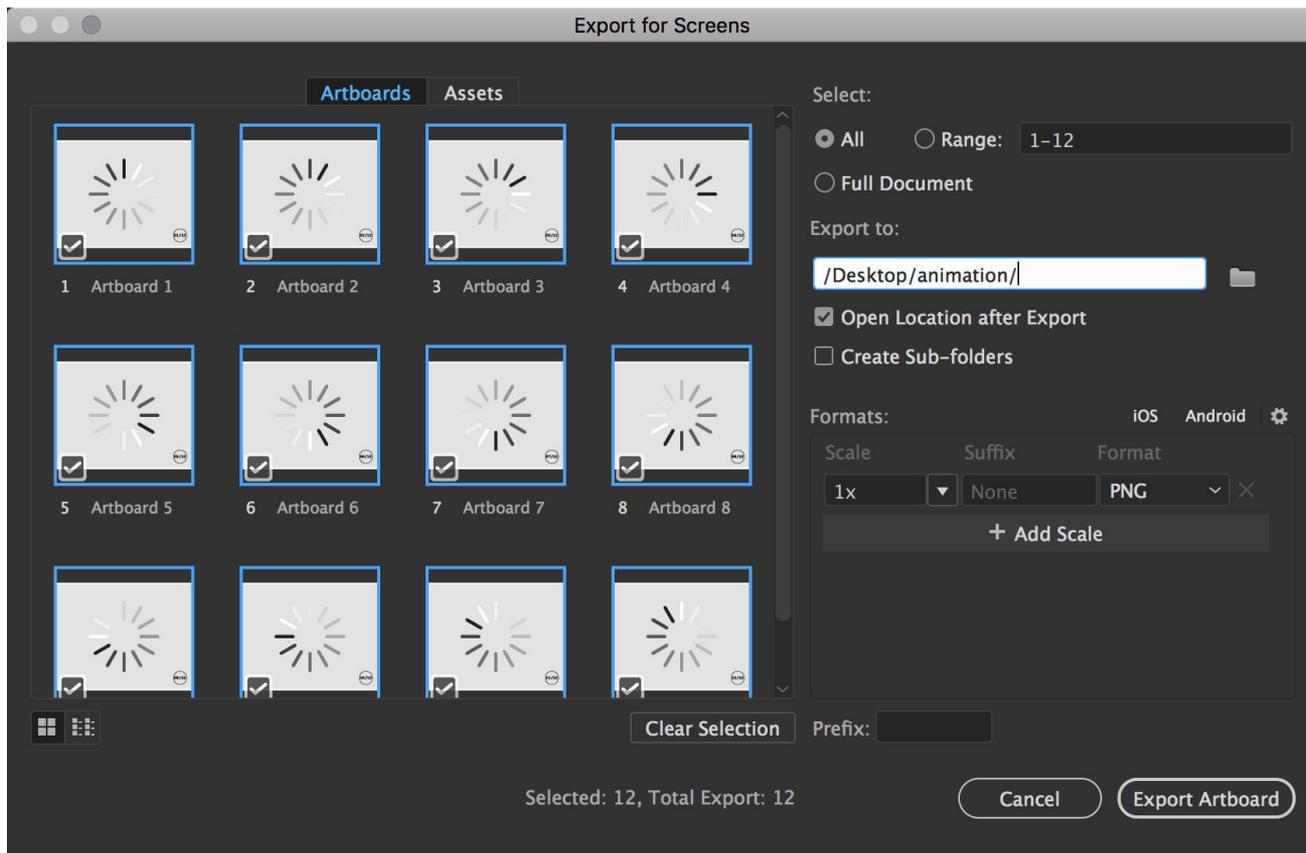


Export for Screens



Be sure that **All Artboards** are being exported

Export for Screens

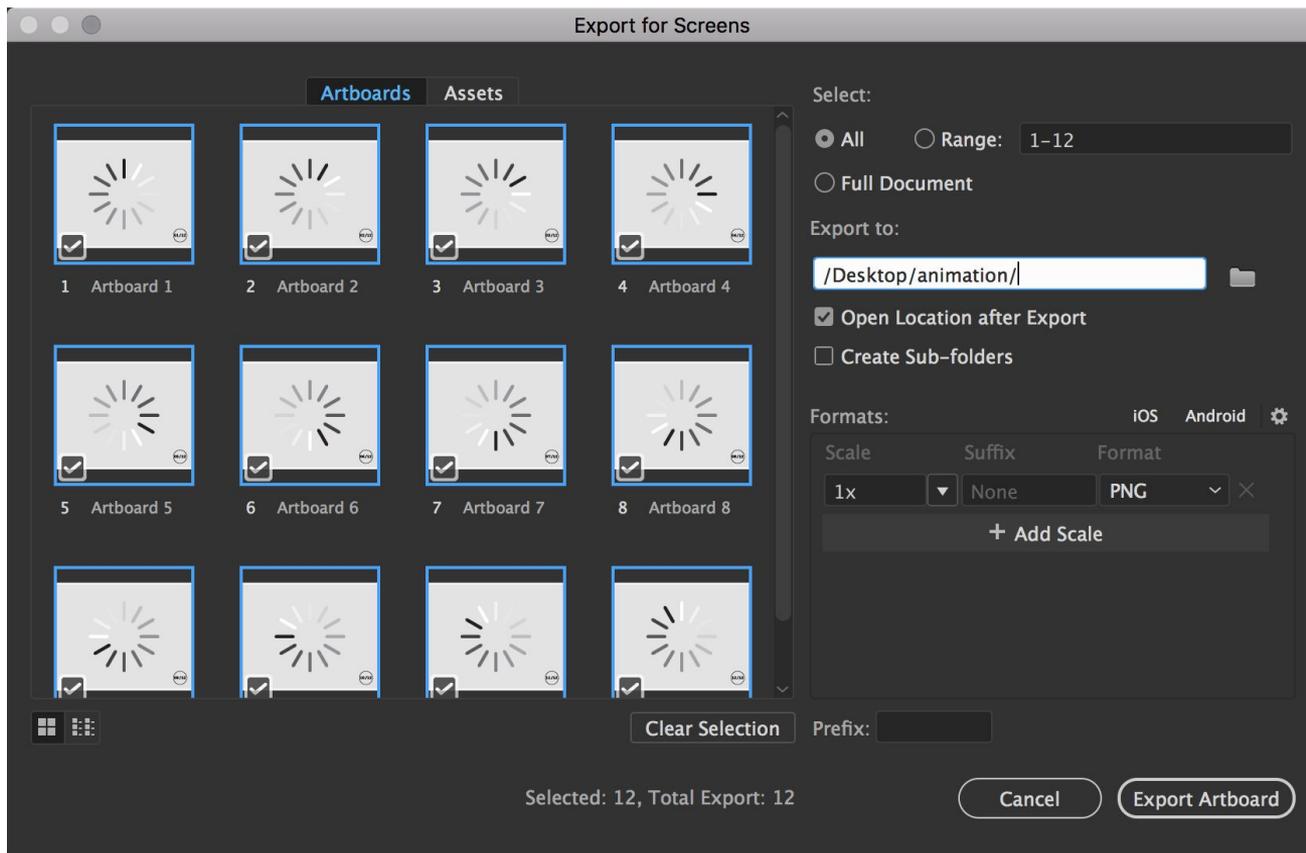


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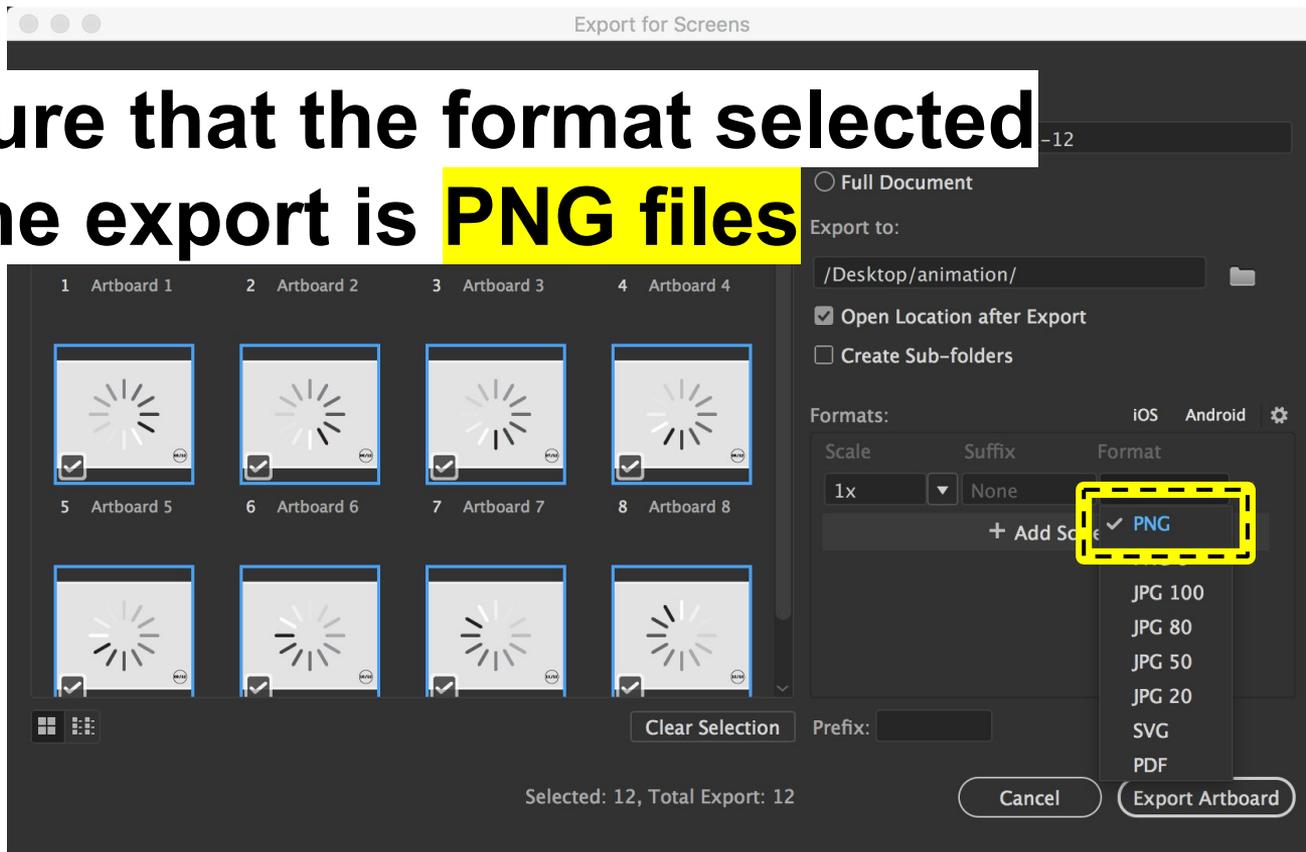
Click the folder icon to choose the **Location** to export the PNG files

Export for Screens



Export for Screens

Be sure that the format selected for the export is **PNG files**



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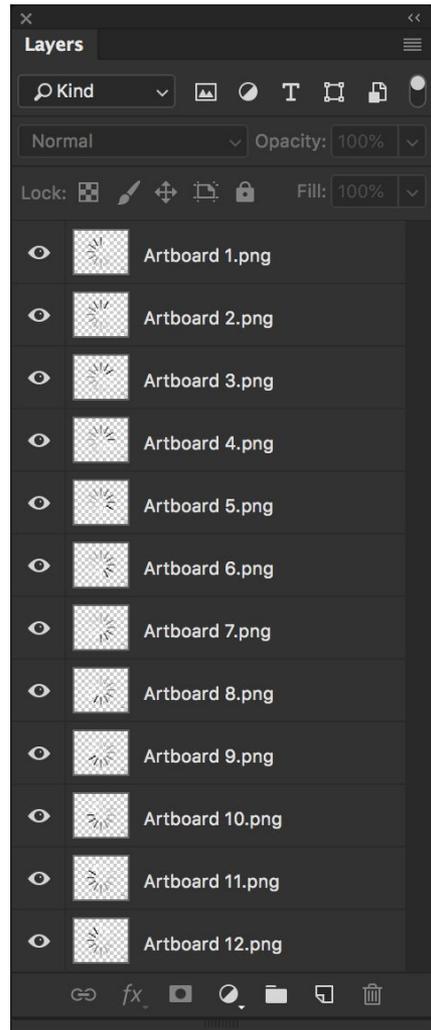
Photoshop Image Stack

To create an **Image Stack** in Photoshop (a single artboard with image information separated in the Layers Palette)...

Photoshop Image Stack

To create an Image Stack in Photoshop (a single artboard with image information separated in the Layers Palette), simply open a file, then **drag-and-drop** the additional files to place them as new layers in the stack.

Photoshop Image Stack



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Timeline Palette

Window Menu

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- Workspace
- ...
- Info
- Layer Comps
- Layers
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- Measurement Log
- Navigator
- Notes
- Paragraph
- Paragraph Styles
- Paths
- Properties
- Styles
- Swatches
- Timeline
- Tool Presets
- ...

Window Menu

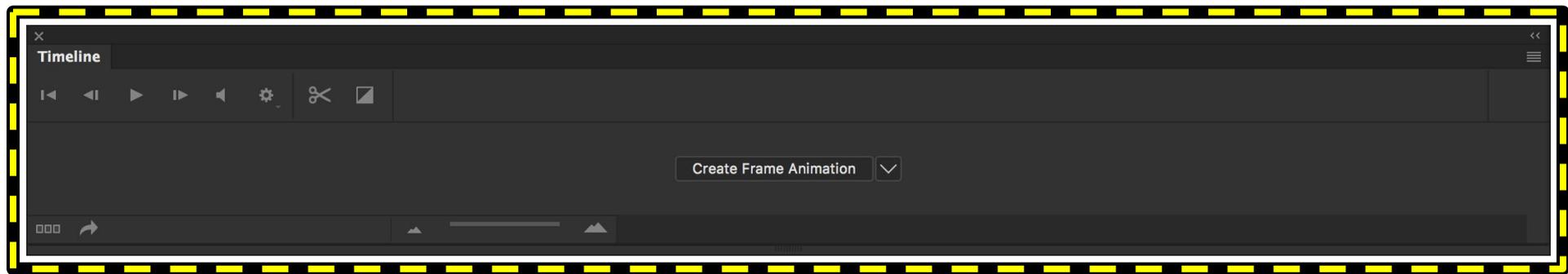
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- Properties
- Timeline**
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Window Menu → Timeline

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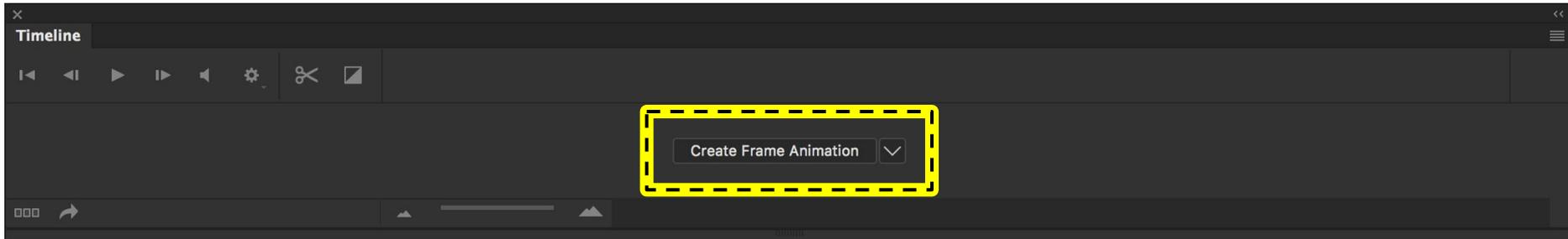
Window Menu → ✓ Timeline

Timeline Palette



Timeline Palette

Use the Timeline Palette to convert your artboard into a **Frame Animation**...



Timeline Palette



Timeline Palette

Click on a frame to select it



Timeline Palette



Timeline Palette

Add frames to the timeline
by **duplicating** the selected frame



Timeline Palette



Timeline Palette

Remove frames from the timeline by **deleting** the selected frame



Timeline Palette



Timeline Palette

Be sure that the animation looping setting is set to **Loop Forever**



Timeline Palette



Timeline Palette

Test the animation using
the **play/stop** button



Timeline Palette



Timeline Palette

Control the speed of the animation by increasing or decreasing the **Frame Delay** for each frame



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www.how-to-design.org is an open-source learning resource.

Class material developed by [Ian Besler](#).

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