Web Gallery Using Flash

Title: Web Gallery Using Flash
By: Ali Akbary

Chapter 9   Make Animation Interactive & Publishing

Learning Outcome

Objectives of this chapter are: -

- ➢ Symbols
  - ❖ Graphic
  - ❖ Button
  - ❖ Movie

WHAT IS SYMBOL

A symbol is a graphic, button, or movie clip that you create once in the Animate authoring environment or by using the SimpleButton (AS 3.0) and MovieClip classes. You can then reuse the symbol throughout your document or in other documents.

A symbol can include artwork that you import from another application. Any symbol that you create automatically becomes part of the library for the current document.

An instance is a copy of a symbol located on the Stage or nested inside another symbol. An instance can be different from its parent symbol in color, size, and function. Editing the symbol updates all of its instances, but applying effects to an instance of a symbol updates only that instance.

Movie Clips Symbols

Use movie clip symbols to create reusable pieces of animation in Adobe Animate. Movie clips have their own multiframe timeline that is independent from the main movie's Timeline. Think of movie clips as mini-timelines nested inside a main Timeline that can contain interactive controls, sounds, and even other movie clip instances.

You can also place movie clip instances inside the timeline of a button symbol to create animated buttons. In addition, movie clips are scriptable with ActionScript.

Figure 1 Movie symbol

Graphics Symbols

Graphic symbol is a collection of frames used in animations or single frame mode. An animated graphic symbol is tied to the Timeline of the document in which the symbol is placed.

In contrast, a movie clip symbol has its own independent Timeline. Animated graphic symbols, because they use the same Timeline as the main document, display their animation in document-editing mode.

Use graphic symbols for static images and to create reusable pieces of animation that are tied to the main Timeline. Interactive controls and sounds won't work in a graphic symbol's animation sequence. Graphic symbols add less to the FLA file size than buttons or movie clips because they have no timeline.

Figure 2 Graphic symbols

GRAPHIC LOOPING

Every graphic symbol instance has looping properties (that is loop mode, first frame, last frame) associated with it. Please see Looping section under object tab in Property inspector to change looping properties of selected symbol instance.
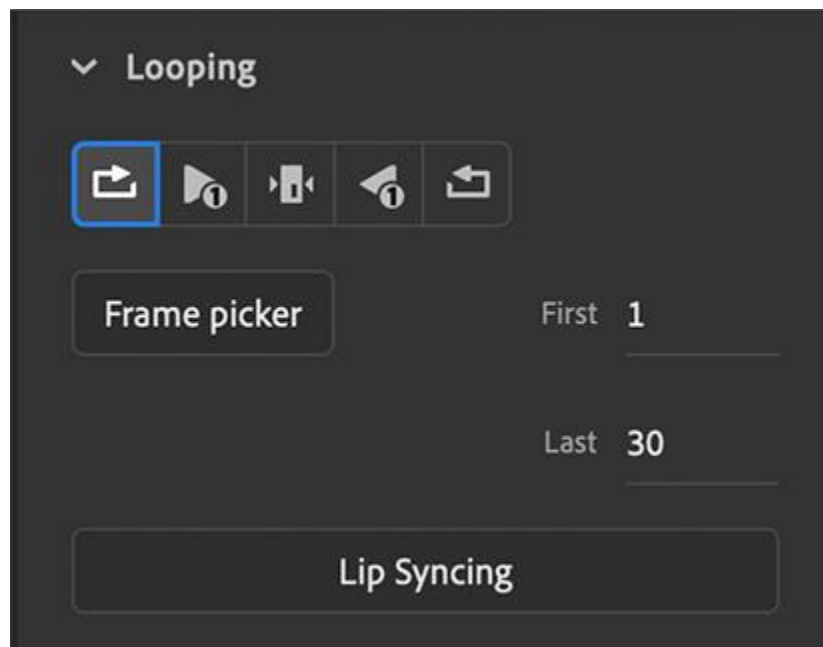

Figure 3 Graphic Lopping

Looping modes: -

There are five looping modes: loop, play once, single frame, reverse play once, reverse loop. Looping mode associated with symbol instance decides playback behavior of that instance.

Names of loop modes are self-explanatory: -

➢ **Loop**: Plays the frames of the Graphic from 'first frame' to 'last frame' in sequence and keeps looping until there are frames on the parent timeline's frame span.

➢ **Play Once**: Plays the frames of the Graphic only once from 'first frame' to 'last frame'. After that instance stays at 'last frame' for the rest of the frames in the parent timeline's frame span.

➢ **Single Frame**: Plays only one frame of Graphic that is pointed by the 'first frame' property.

➢ **Reverse Play Once**: Plays the frames of the Graphic only once in reverse order that is starting from 'last frame' to 'first frame'. After that instance stays at 'first frame' for the rest of the frames in the parent timeline's frame span.

➢ **Reverse Loop**: Plays the frames of the Graphic in reverse order that is starting from 'last frame' to 'first frame' in sequence & keep looping over in reverse order until there are frames on the parent timeline's frame span.

➢ **First frame**: 'First' specifies from which frame of Graphic, the loop playback of symbol instance should begin.

➢ **Last frame**: 'Last' specifies up to which frame of Graphic, the loop playback should go. By default, 'Last frame' is not set. In that case, the last frame of the Graphic timeline is assumed as the last frame. However, the user can change it to any other frame number.

Button symbols

Button symbols are a special type of four-frame interactive movie clip in Adobe Animate. When you select the button type when creating a symbol, Animate creates a Timeline with four frames. The first three frames display the button's three possible states: Up, Over, and Down; the fourth frame defines the active area of the button.
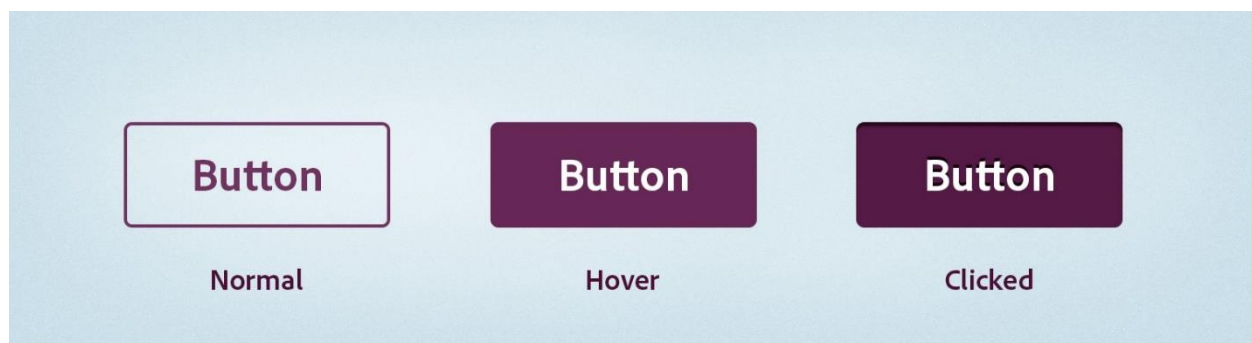

Figure 4 Button Symbols

The button symbol timeline doesn't actually play linearly like a normal timeline; it reacts to mouse pointer movement and actions by jumping to the appropriate frame. To make a button interactive, place an instance of the button symbol on the Stage and assign actions to the instance.

You assign the actions to the root timeline of the Animate file. If the button is inside a movie clip, you can add the actions to the movie clip's timeline. Do not add actions to the timeline of the button symbol.

BASIC SHAPES

The Oval and Rectangle tools let you create these basic geometric shapes, and apply strokes, fills, and specify rounded corners. In addition to the Merge and Object drawing modes, the Oval and Rectangle tools also provide the Primitive Object drawing mode.

When you create rectangles or ovals using the Rectangle Primitive or Oval Primitive tools, Animate draws the shapes as separate objects. These shapes unlike the shapes you create using Object Drawing mode. The primitive shape tools let you specify the corner radius of rectangles using controls in the Property inspector.
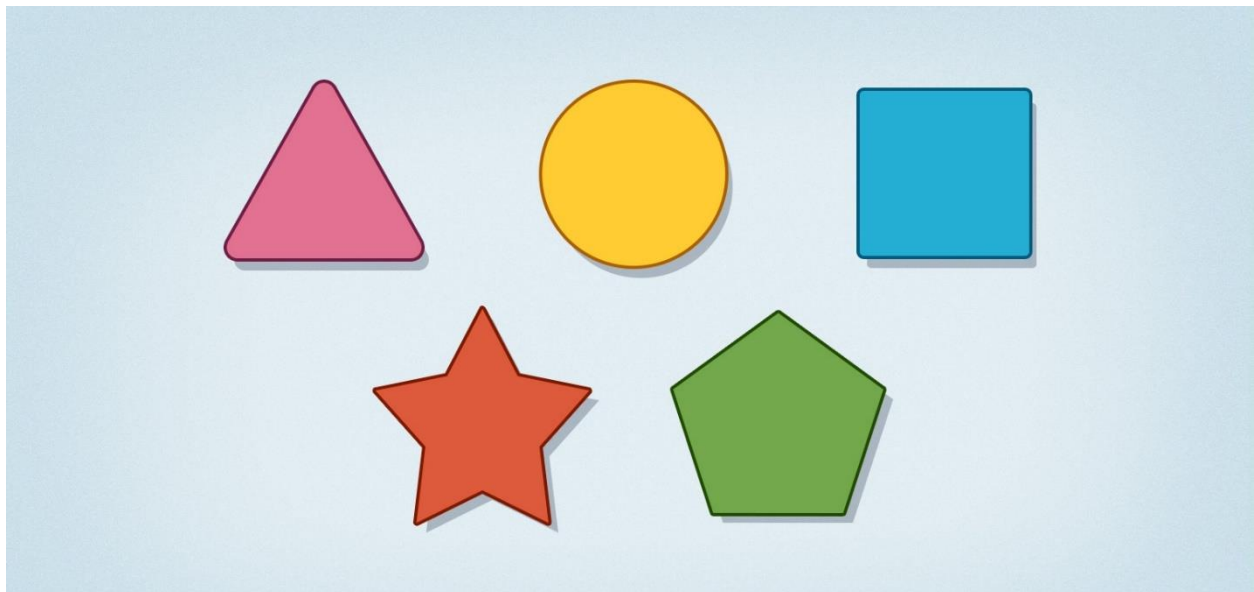

Figure 5 Animate Shapes

Drawing objects

When you draw vector graphics in Adobe Animate with the Object Drawing mode enabled at the bottom of the Tools panel, you create shapes referred to as drawing objects. These are separate graphic objects that do not automatically merge together when overlaid on other objects.
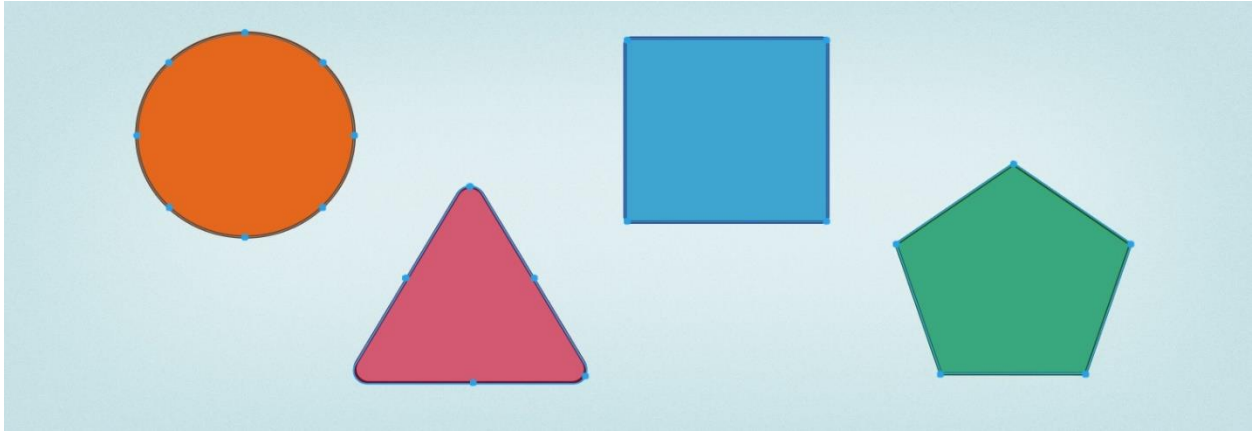
Figure 6 Drawing Objects

By choosing Object Drawing mode, you can overlap shapes on the same layer without altering their appearance if you move them apart, reposition, or rearrange their appearance.

In an Object Drawing mode, Animate creates each shape as a separate object that you can individually manipulate, similar to when objects are grouped. When a drawing tool is in Object Drawing mode, the shapes you create with it are self-contained. The stroke and fill of a shape are not separate elements, and shapes that overlap do not alter one another. When you select a shape created using Object Drawing mode, the shape displays a rectangular bounding box to identify it.

Bitmap

Bitmap graphics are used to display photographic content, such as images captured with a digital camera. These files display individual pixels that contain unique color values; when viewed together, the pixels include the photo or image.

Figure 7 Bitmap images

Bitmap graphics should not be scaled. If you want to import bitmap graphics into Animate, use an image-editing program to resize and optimize them before bringing them in. When you scale bitmap graphics, you lose pixel data and the quality of the image can be compromised. Convert imported bitmap graphics into symbols to improve performance in Animate.

You can use the Paint Bucket tool to fill a vector object with the pixels of an imported bitmap. The file format most commonly associated with bitmap graphics is JPEG.

Video

When you embed video in Adobe Animate, the video file data is added to the Animate file. This results in a much larger Animate file and subsequent SWF file. The video is placed in the Timeline where you can see the individual video frames represented in the Timeline frames. Because each video frame is represented by a frame in the Timeline, the frame rate of the video clip and the SWF file must be set to the same rate.

Figure 8 Video

If you use different frame rates for the SWF file and the embedded video clip, video playback will be inconsistent. Embedded video works best for smaller video clips, with a playback time of less than 10 seconds. If you are using video clips with longer playback times, consider using progressively downloaded video or streaming video using Flash Media Server.

Audio

Adobe Animate offers several ways to use sound. Make sounds that play continuously, independent of the Timeline, or use the Timeline to synchronize animation to a soundtrack. Add sounds to buttons to make them more interactive, and make sounds fade in and out for a more polished soundtrack.

Figure 9 Audio

There are two types of sounds in Animate: event sounds and stream sounds:

➢ An event sound must download completely before it begins playing, and it continues playing until explicitly stopped.
➢ Stream sounds begin playing when enough data for the first few frames has been downloaded; stream sounds are synchronized to the Timeline for playing on a website.

Groups

Use groups to logically organize objects for easy manipulation. For example, after creating a drawing, you might group the elements of the drawing so that you can easily select and move the drawing as a whole.
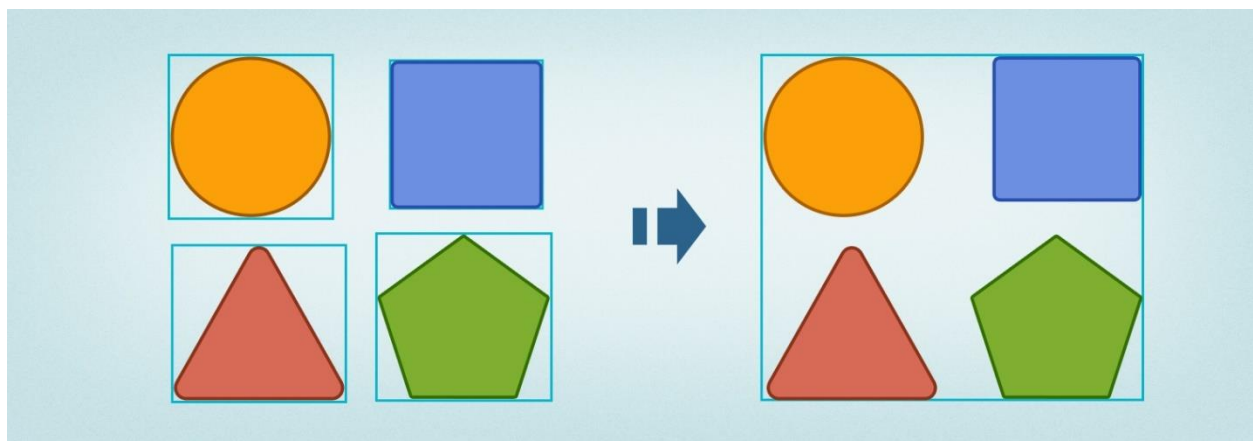
Figure 10 Groups

When you select a group, the Property inspector displays the x and y coordinates of the group and its pixel dimensions. You can edit groups without ungrouping them. You can also select an individual object in a group for editing without ungrouping the objects.

Text

Figure 11 Text

You can use the Text tool to create three types of text fields in Adobe Animate: static, dynamic, and input.

All text fields support Unicode: -

- ➢ Static text fields display text characters that don't change dynamically.
- ➢ Dynamic text fields display dynamically updating text, such as game scores or user names.
- ➢ Input text fields allow users to enter text in forms or surveys.

You can create horizontal text (with a left-to-right flow) or static vertical text (with either a right-to-left or left-to-right flow).

CONTINUE WITH OUR PROJECT

For this project we need to create some graphic art with photoshop. We need to create frame for video and button for play and pause.

Creating frame and button in photoshop

➢ Open photoshop and click create new, set the size to the size of animate project size (1280 px X 720 px.

➢ Select rectangle click on stage area and enter the value of 1280 px X 720 px. Set the x location to "0" and y location to "0" too. Rename the layer as frame.

➢ Select rectangle again and click on stage area. Enter the value of 1250 px X 630 px. Set the x location to "15" and y location to "15" too.
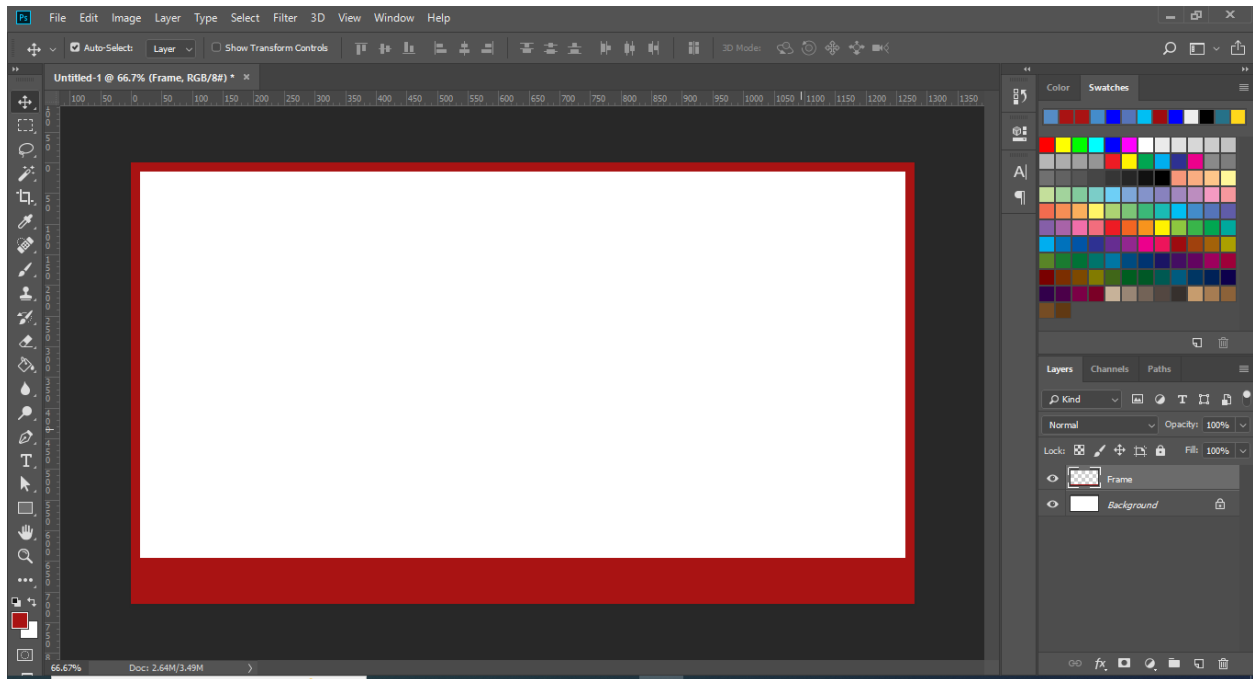

Figure 12 creating frame for player in photoshop

➢ Right click on layer panel and choose Rasterize Layer for both of the rectangle.

➢ Select frame layer and Ctrl + click in smaller rectangle. Click delete to delete middle part of the frame layer. Now can delete the small rectangle.

➢ Now you can apply all kind of effect to the frame as you wish. Just double click on layer to open effect panel and change the properties.
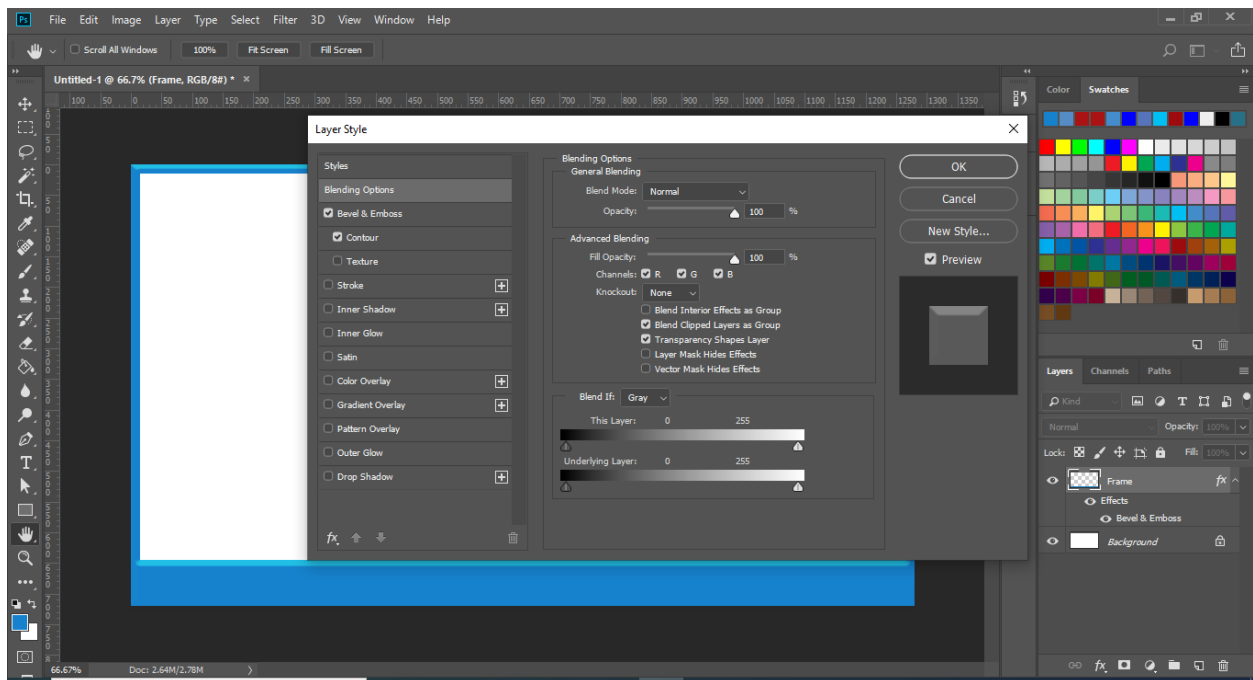
Figure 13 Frame after applying effect

➢ Now we will create graphic arts for play button. The button will have two stages, Normal state and Hand Over (hover) state.
➢ First, we create Normal state button. Select rectangle from tool panel, click on stage and set the widths and height for the button. (200 px X 60 px)
➢ Rename the layer to Button. Right click and choose Rasterize layer and double click on layer, for effect panel and adjust necessary adjustment to the button and click ok.
➢ Click on polygon tools, set the sides to 3, click on stage to insert triangle set the value to 30 px X 30 px. Rename it to Play.
➢ Select Button in the layer panel, right click and duplicate. and do the same for Play too. Select one of the Button and one of the Play and right click and choose merge layer and rename it as Normal.
➢ Double click on button and change the color as you wish. Now click button and play, right click and choose merge layer again and Rename it hover.
➢ Change the color for hover as you wish.
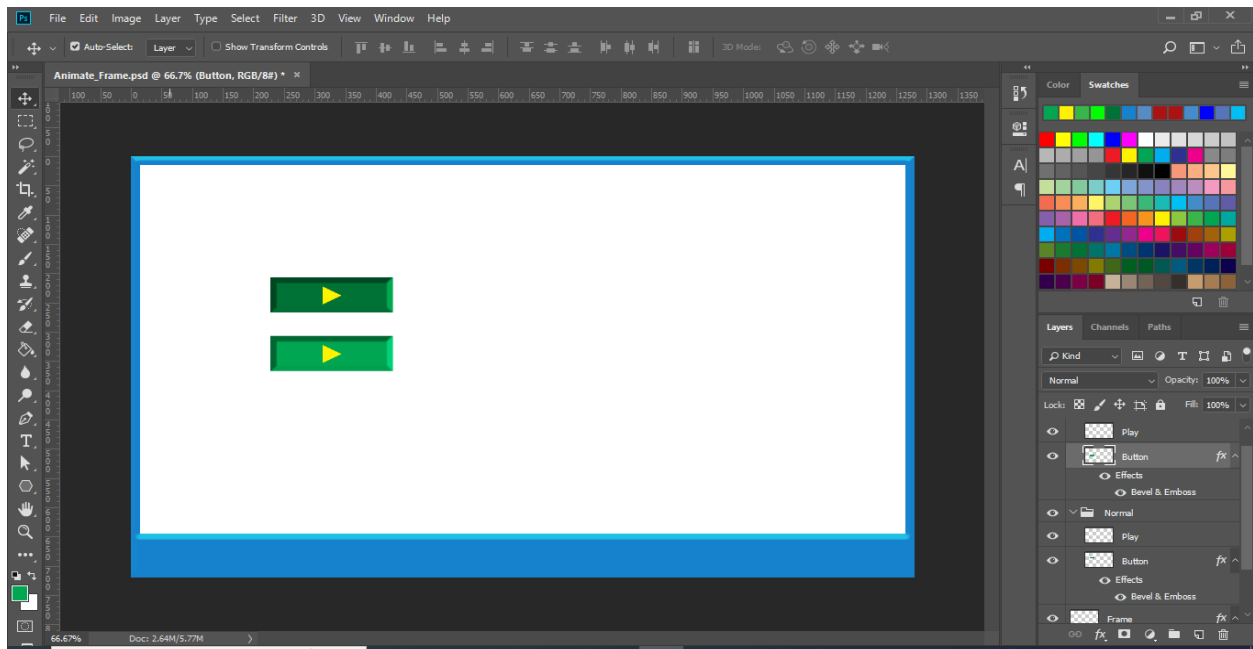➢ Now we save the file as a animate_Frame_Button.PSD file.

Figure 14 final play buttons

Continue the project in Animate

Open the project in animate. For interactive media we need to convert our project to HTML5 document.

➢ Go to File – Convert – HTML5 Canvas. It will ask to save as a new document, but still as a .fla format. Save the document as a Interactive.fla.
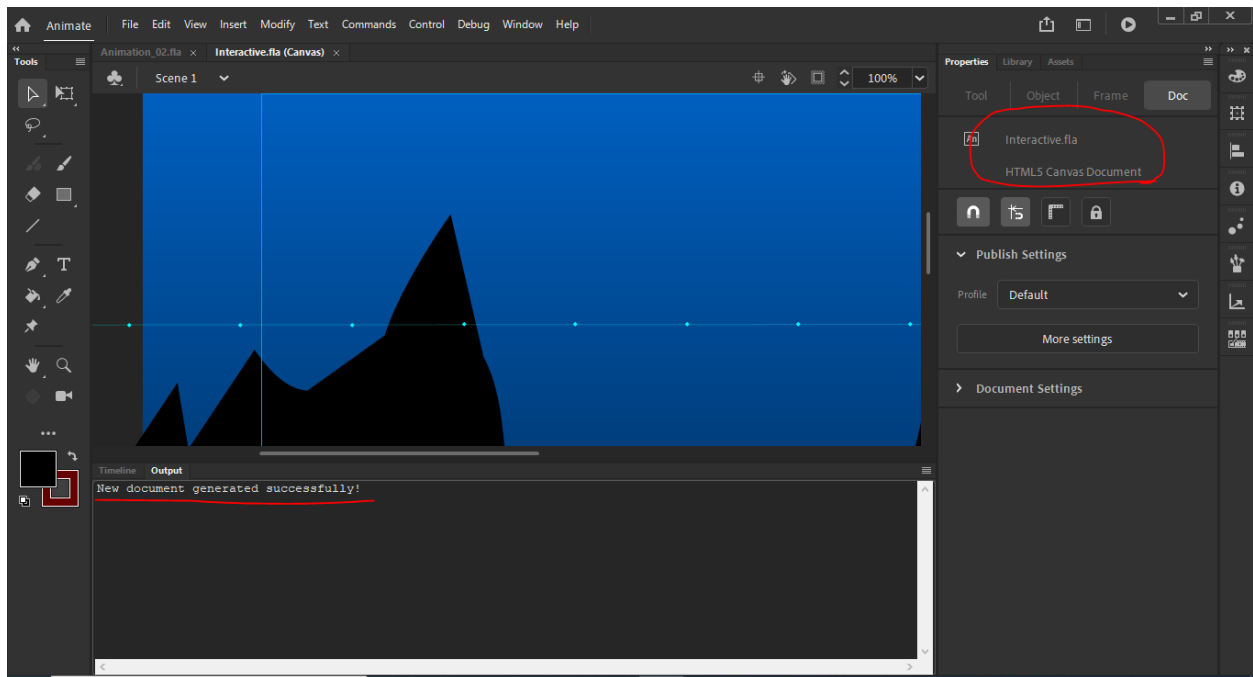

Figure 15 Converting to HTML5 Canvas
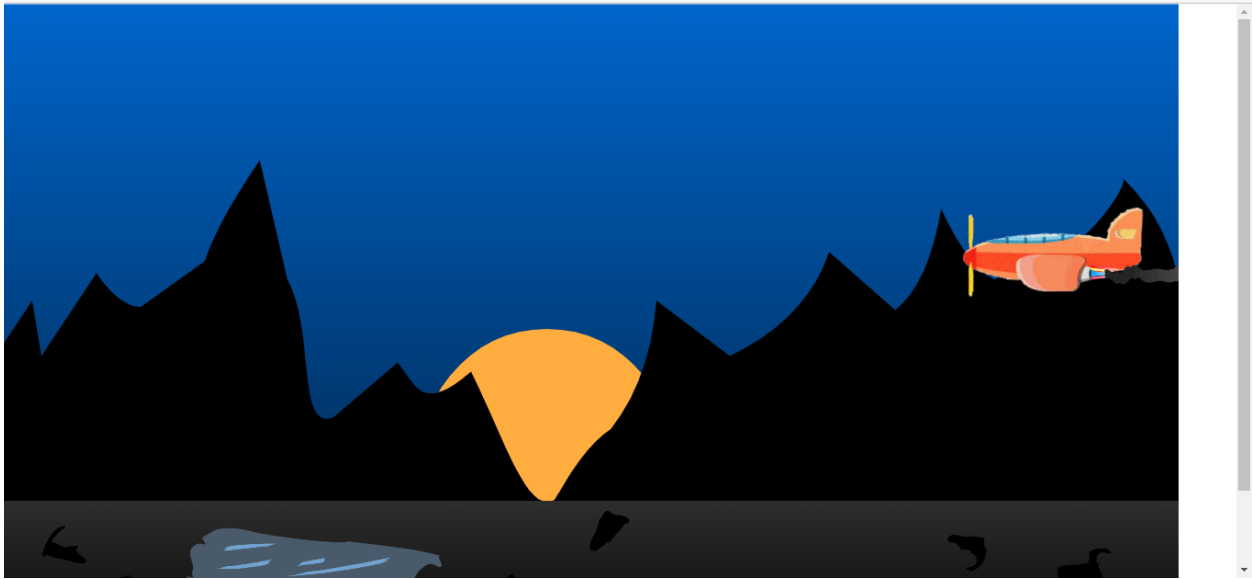
➢ If we click play, it will play in browser.

Figure 16 Playing animate in HTML5 on browser

➢ Go to file – Import – Import to stage – choose file animate_Frame_Button.PSD which created earlier and click open.
➢ Select files we required for animation and choose compression type. We need "Lossless". We change to all of the layers. Change the convert layer to "Single Animate Layer".
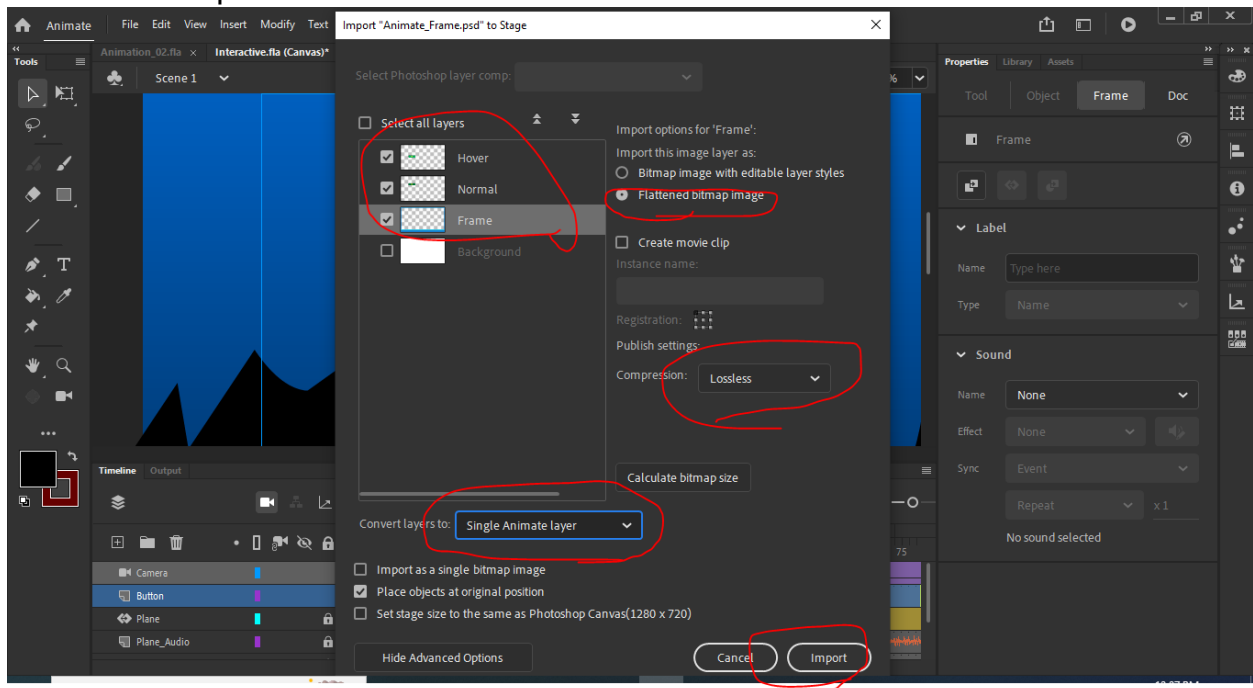➢ Click Import.

Figure 17 Importing file into stage area

- It will create new layer with the same name as photoshop file name.
- When we play the movie, we can see that the frame also moving with camera, we need to exclude frame from moving, click on camera in front of the layer Animate_Frame_PSD. We can rename it to "ui".
- We want this frame only exist only in starting the animation and after click play to go away. For this purpose, click on frame 2 in the "ui" layer and right click choose insert blank keyframe or F7.
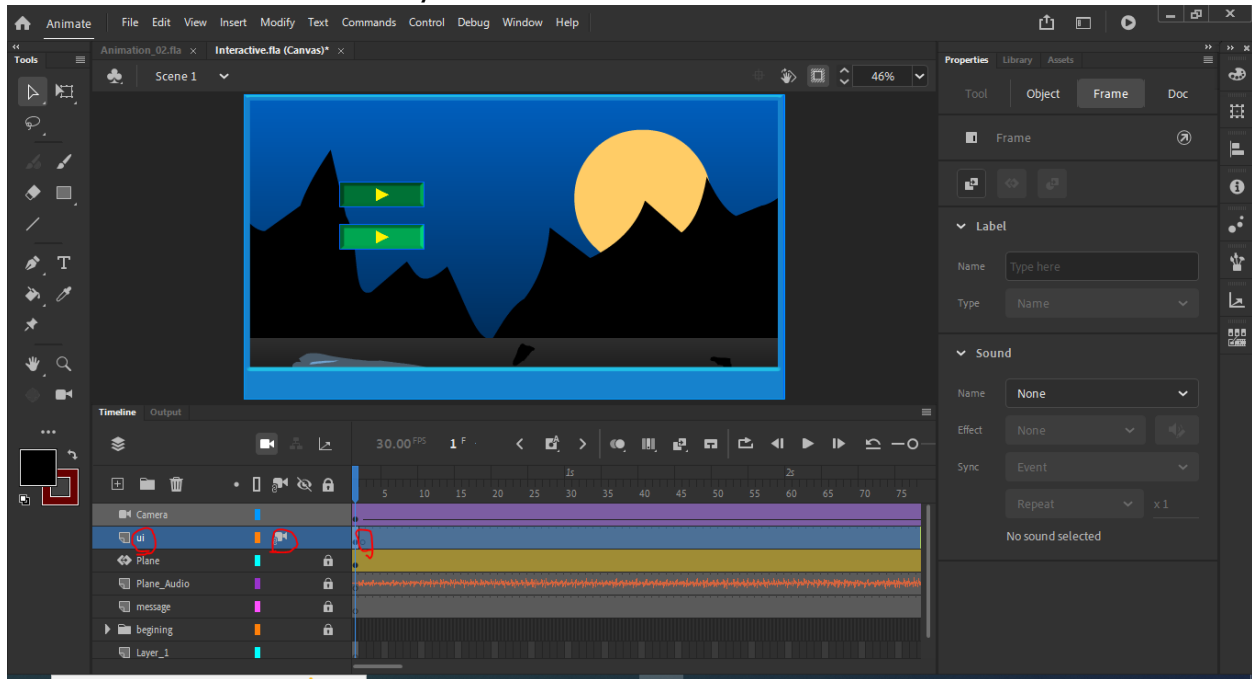

Figure 18 Attaching layer to Camera.

- Now we are going to create button symbols. Button symbols have 4 stage. (Up, Over, Down, and Hit)
- Click and delete hover image from the stage area, because we already have it in library panel. And adjust the normal button in the bottom center of the frame.
- Now we need to convert the image to button symbol. Right click on image or go to modify and convert to symbol or press F8. Rename it "StartBtn" and choose symbol as button.
- Now, go to library panel, double click on "StartBtn" to open in button timeline.
- Press F6, to create keyframes in all the stages. Move playhead to frame 2, Over, select the image on stage and go to property panel and click on double arrow button to swap the image and choose hover image.
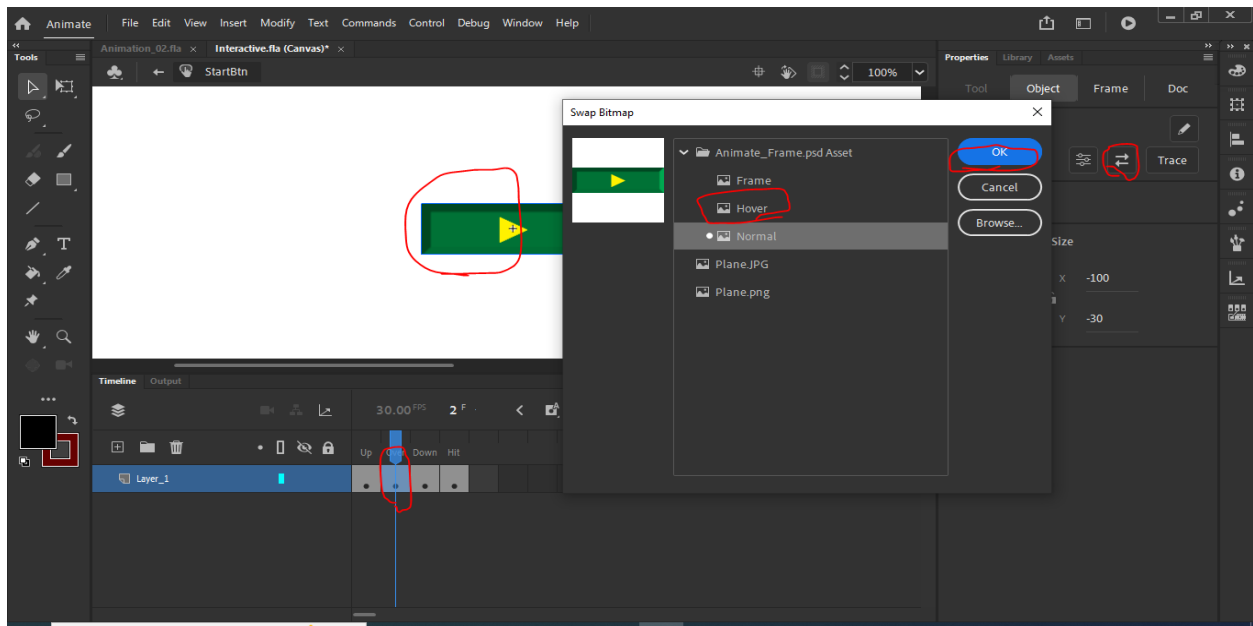- The Down and Hit stage we can leave as it is or we can create the buttons in photoshop.

Figure 19 creating button symbol

Adding sound to buttons

➢ Rename the layer as Button. Press "+" sign to create new layer, rename it sounds.
➢ Press F7 to create empty frame on every state, (Up, Down, Over, and Hit)
➢ Go to file, Import, Import to Library, select the two sound effects, "Click.mp3 and hover.mp3", and click open.
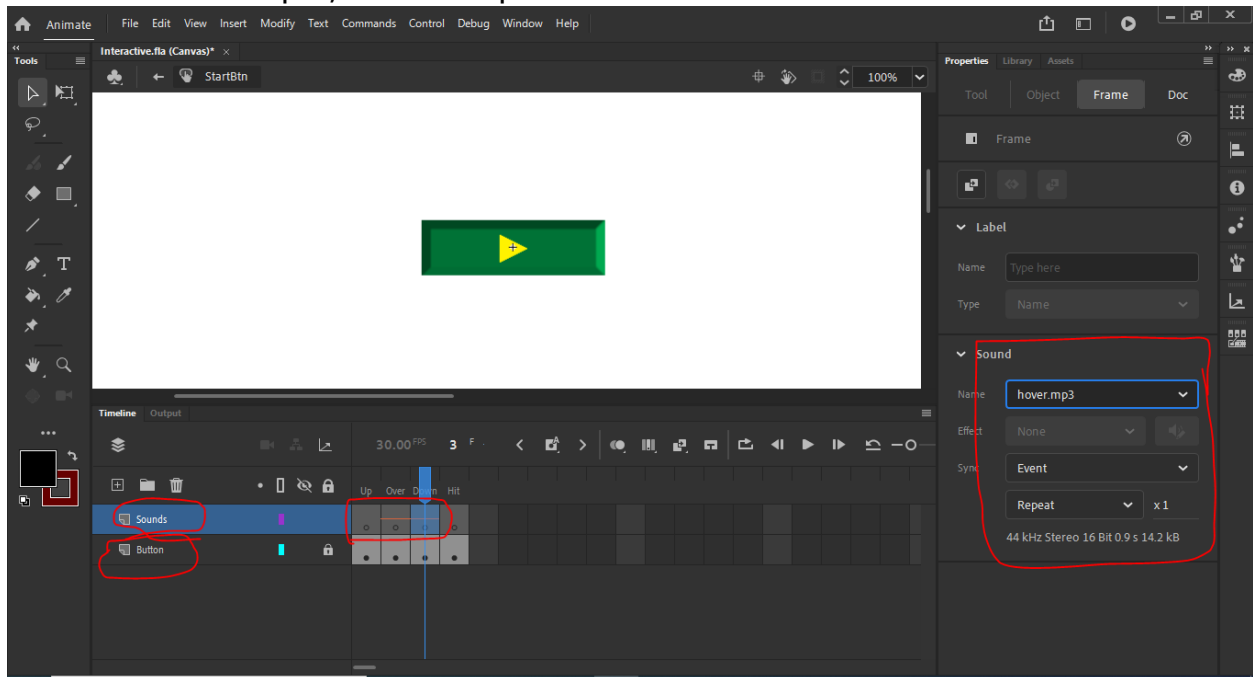

Figure 20 adding sound effects to button's state

- Select frame above down stage, and look at the property panel under sound, dropdown box and choose "Click.mp3", change the Sync type to Event, and repeat X 1.
- Do the same for Over stage, and this time choose "hover.mp3". and change the Sync type to Event, and repeat X 1.
- Now click to run in the browser and test it. It will play without interaction. Now we add interactivity to our project.
- First, we need to give instance name to our button, because we need to add code for it. Select button on stage, go to property panel, give the button name. we can name it as we want but we should always give the name related to item we are creating. Example this button is for starting animation, it is good idea to give a name "startButton".
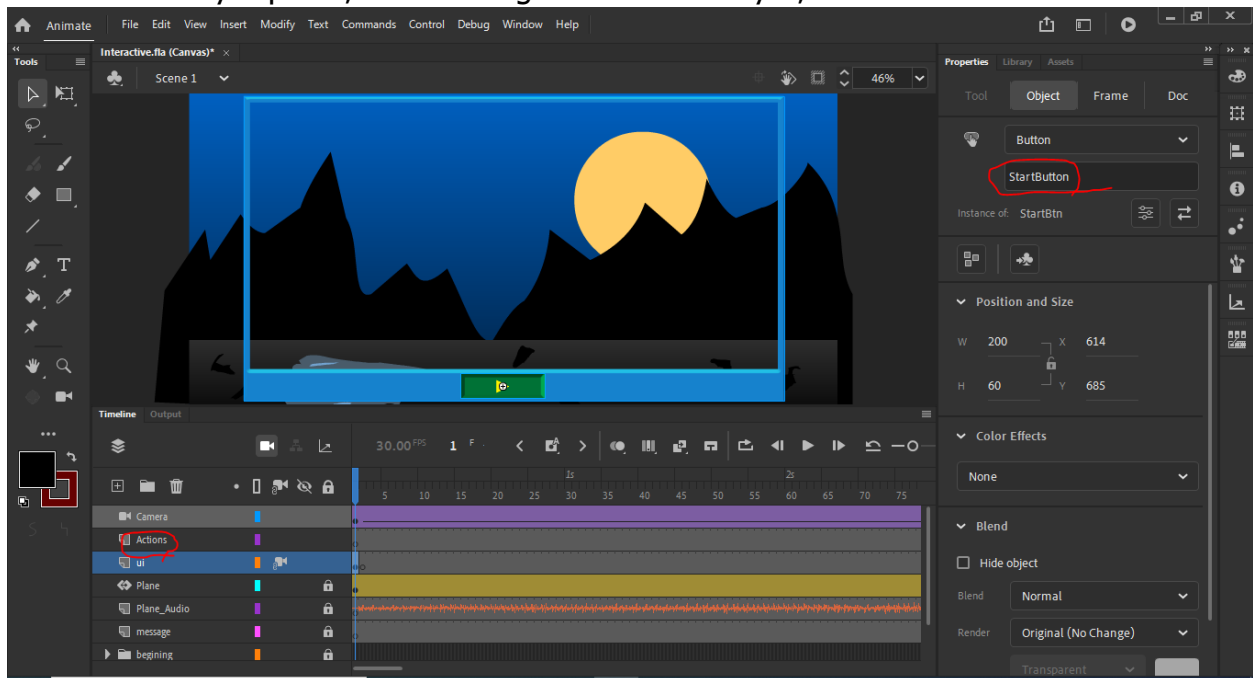- Go to layer panel, click "+" sign to add new layer, rename it "Actions".

Figure 21 adding instance name to button and also creating Actions layer.

- Select the Actions layer. Move playhead to frame 1. Go to property panel. Under Frame, there is small arrow, click that arrow icon to enter script for the button.
- If we know the code, just we write the code. Or just click on add using wizard to choose from presets.
- We can search the item we required. First of all, we want the animation to stop at frame 1, so we click on play button to start playing. We search word "stop".
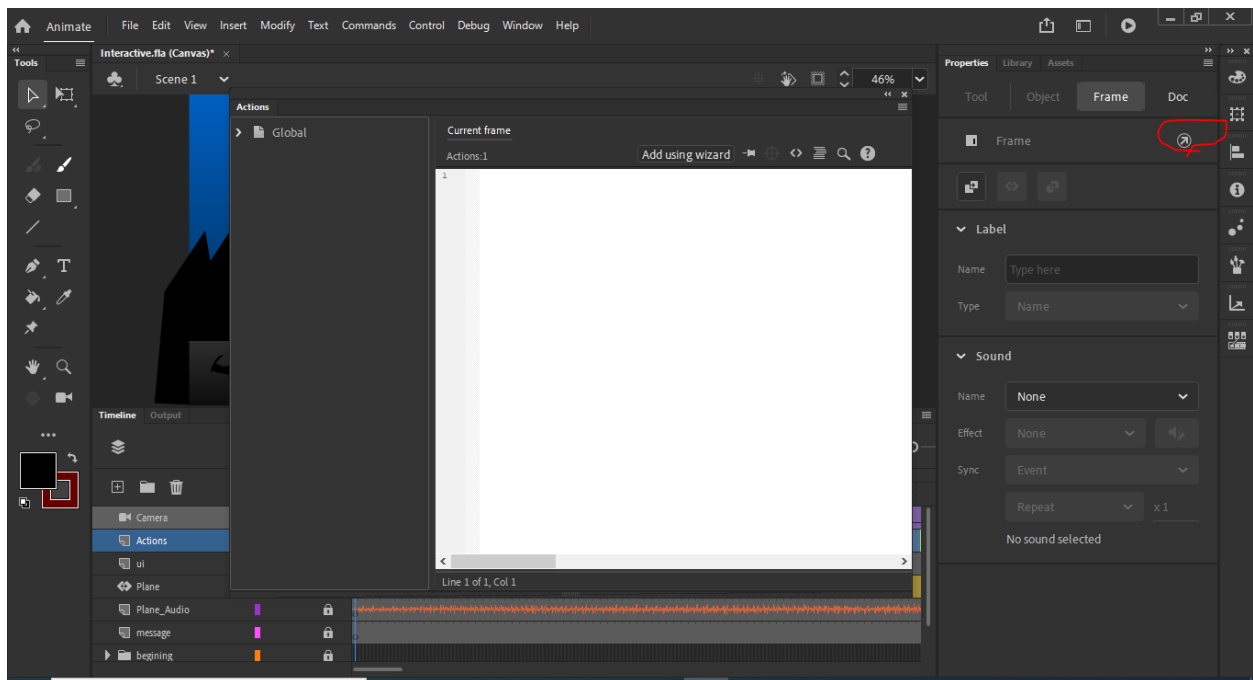-

Figure 22 entering action script panel.

➢ We select the stop; it will show option that we are going to apply stop to it. Our goal is to stop playing in timeline. Click on This timeline and click next.

➢ Next will ask us to select Triggering Events. There are options to choose, we wat to stop at this frame. So, select "With this frame".
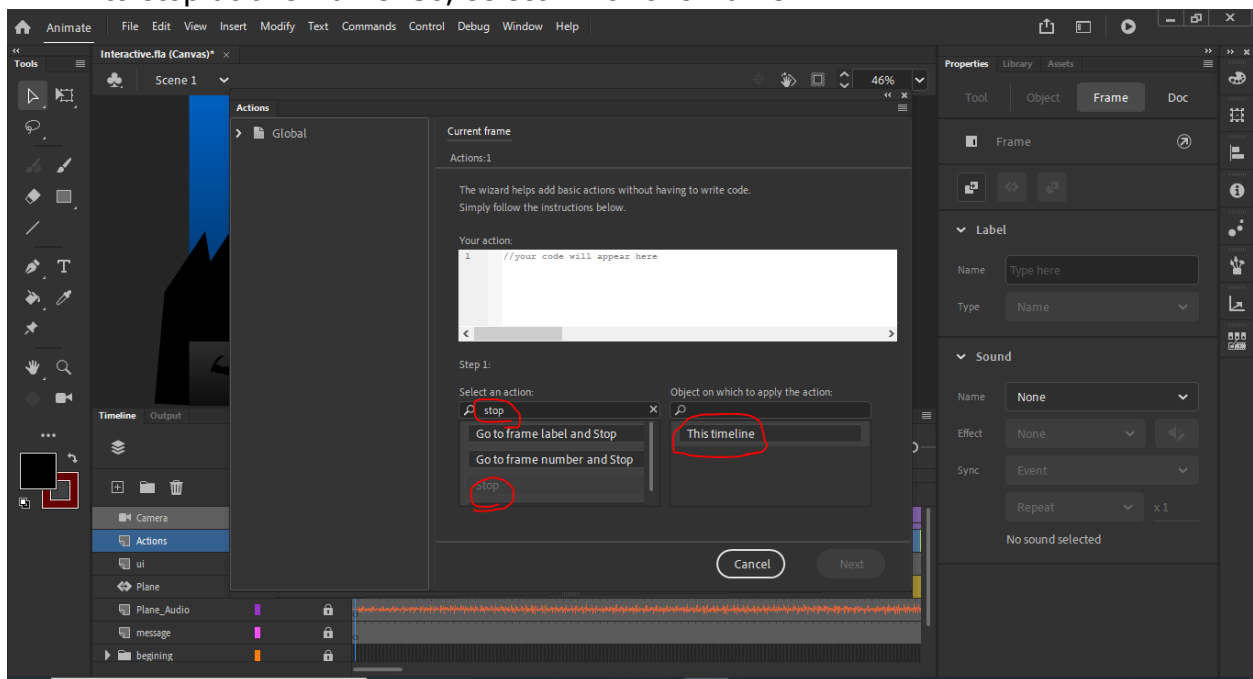

Figure 23 Adding Event

➢ Click on finish and Add.

- And now we want to add another event. When our animation stopped at the frame 1. We want to click on play button to play animation. Click on double Arrow on top to go back previous screen and search for new event. Search for play.
- We select the play; it will show option that we are going to apply stop to it. Our goal is to play in timeline. Click on This timeline and click next.
- Next will ask us to select Triggering Events. There are options to choose, we wat to play by mouse click. Choose mouse click, it will show the button instance name "startButton". Click finish and Add.
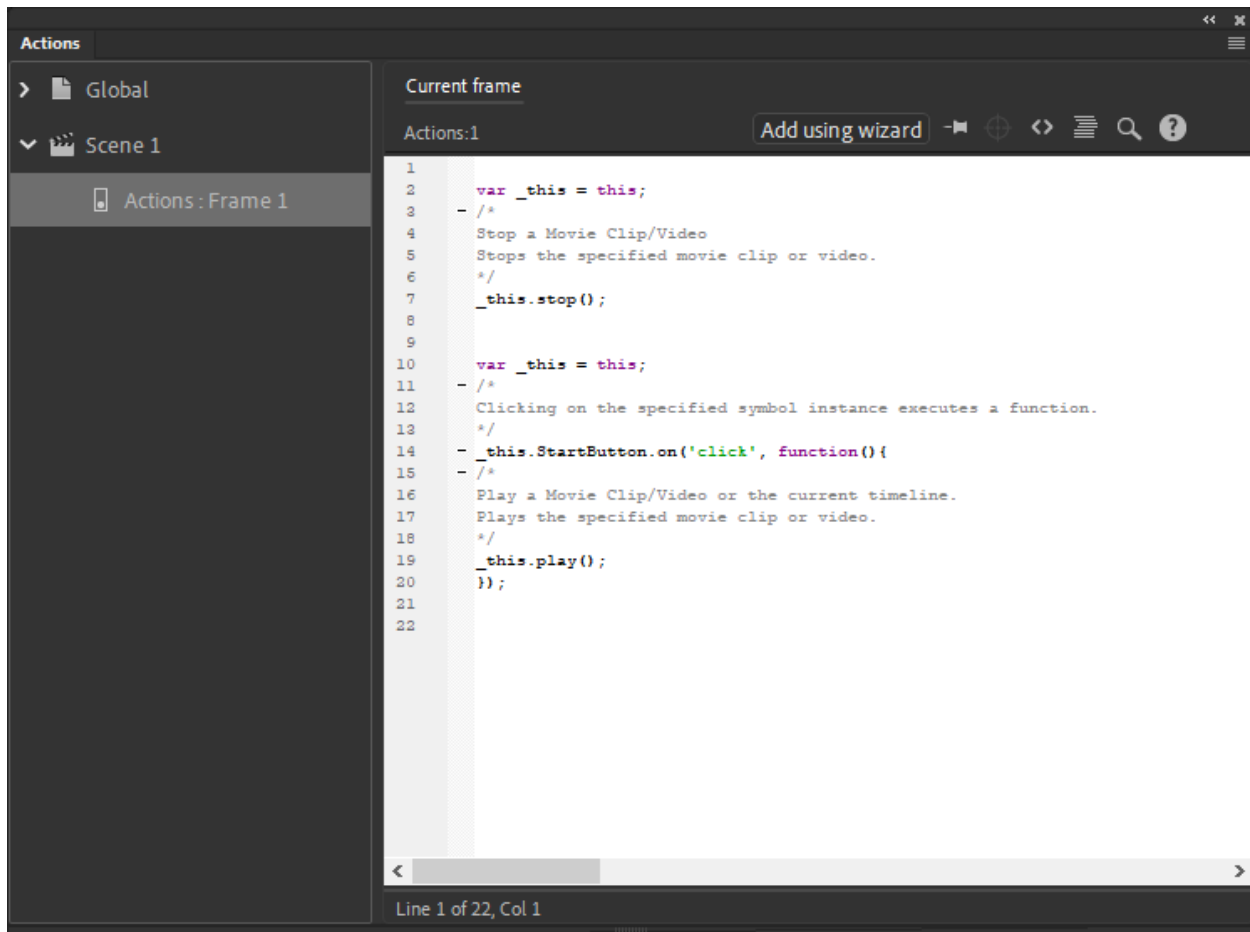

Figure 24 script code for interactive buttons

- Click close and test it.
- Our animation will stop and wait for us to click on play button. Let's click on play button and test it. Well, it is working very well.
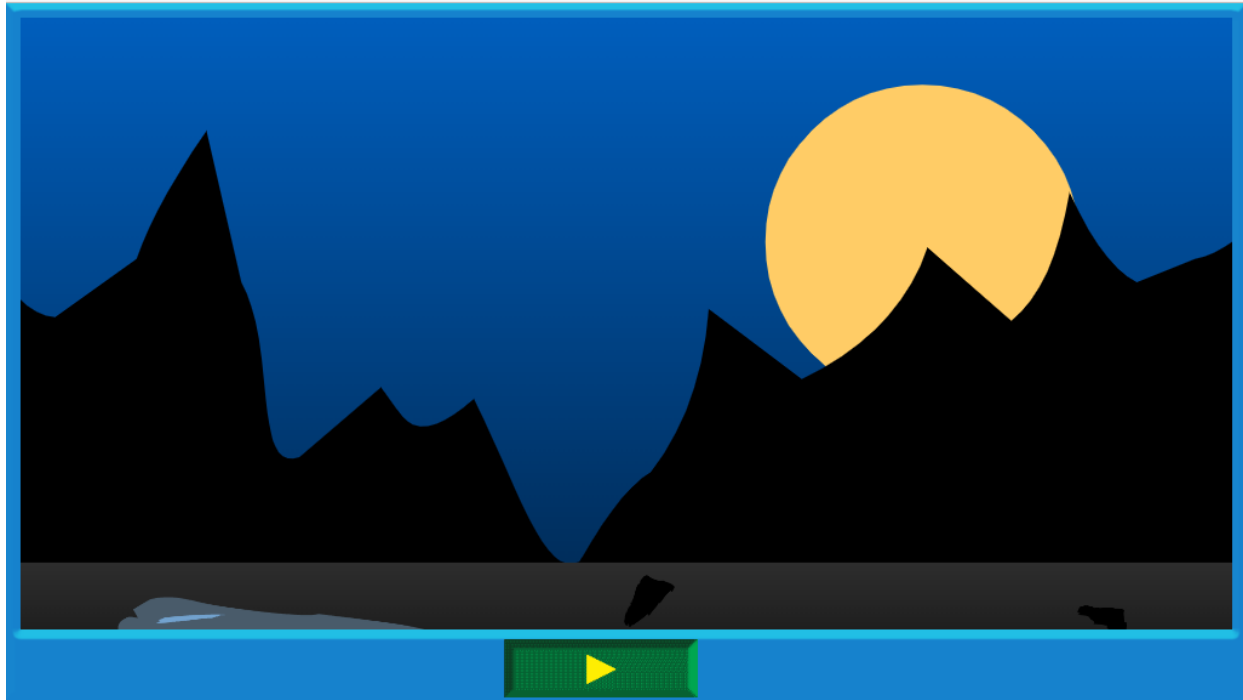
Figure 25 testing and playing the animation

PUBLISHING THE PROJECT

Now our animated interactive project is now complete. But before we go, we need to publish the project. In document properties, click on more settings under publish settings, and here we get our publish settings dialogue.

- ➢ In the document property – publish setting – more settings
- ➢ On publishing to selected JavaScript and HTML the basic settings are
    - ❖ Output name – give a name for your animation to be published
    - ❖ Loop timeline - choosing to loop the timeline or not, if we untick this, it basically stops the play head at the final frame.
    - ❖ Include hidden layers - We can include hidden layers or not.
    - ❖ Center stage - most importantly we can do things like center the stage. Horizontal, vertical or both.
    - ❖ Make Responsive - We can also make responsive. So, it could play in devices. Mobile device, iPad, or desktop. Choosing to make responsive is going to actually shrink things down to scale if we need to.
    - ❖ Include preloader - We can also include a preloaded and we have choices on where different textures and sounds and things like that are exported.
    - ❖ It's important to note that when using HTML5 Canvas, you'll get a number of different files. You'll get HTML files, JavaScript files, library files, sound files and image files all in their own particular folders.
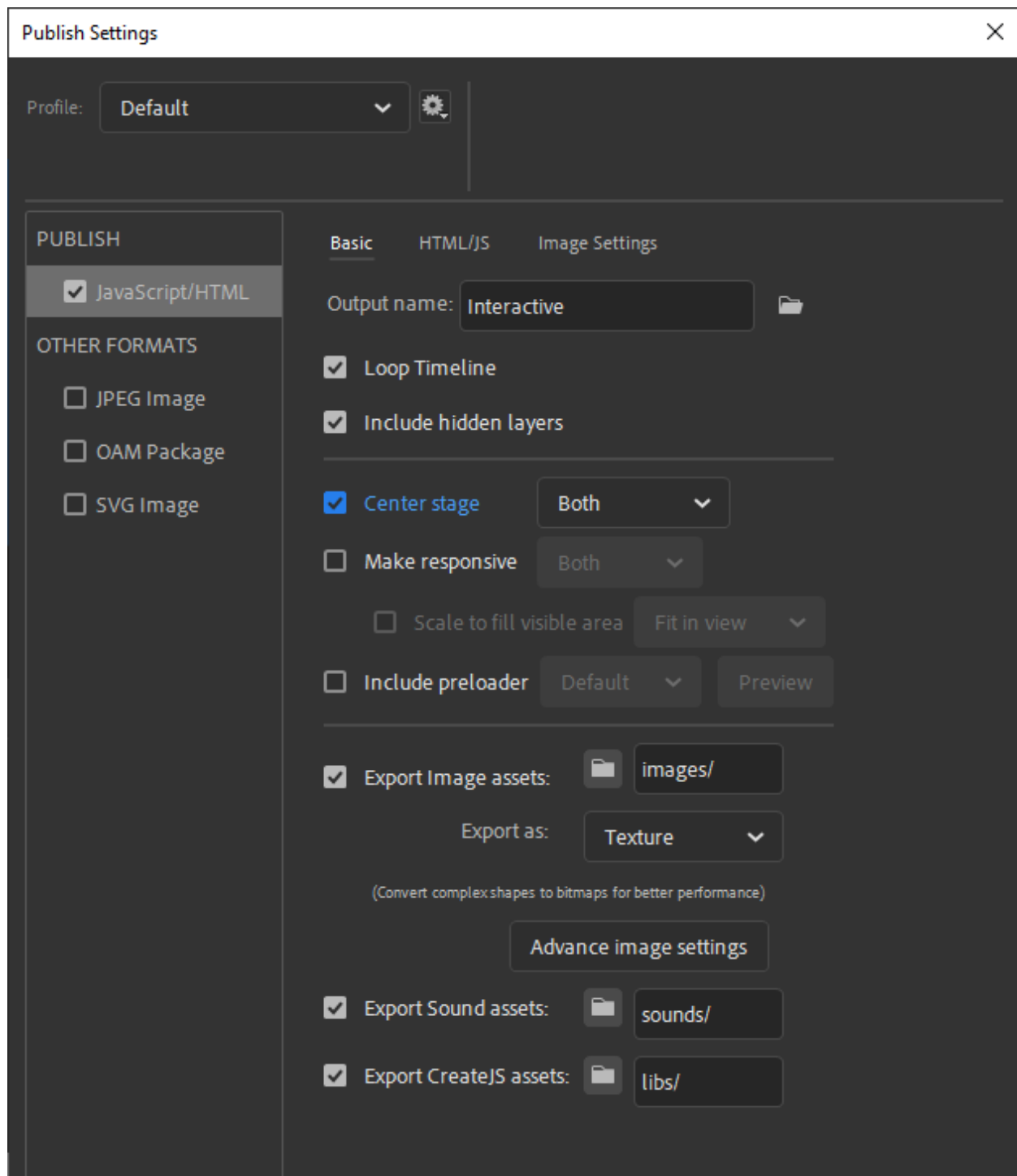
Figure 26 Publish setting

➢ We can click on HTML/JS section on top
  ❖ When you upload this to a web server, you need to keep all of these relationships and files intact. There are some more advanced settings

under HTML/ JavaScript. You can use HTML templates to include additional libraries and things of that nature.

❖ And you can choose to use the hosted three.js libraries. You can also find tune how your images are compressed, exported and arranged.

❖ We keep all these on default setting and click ok.

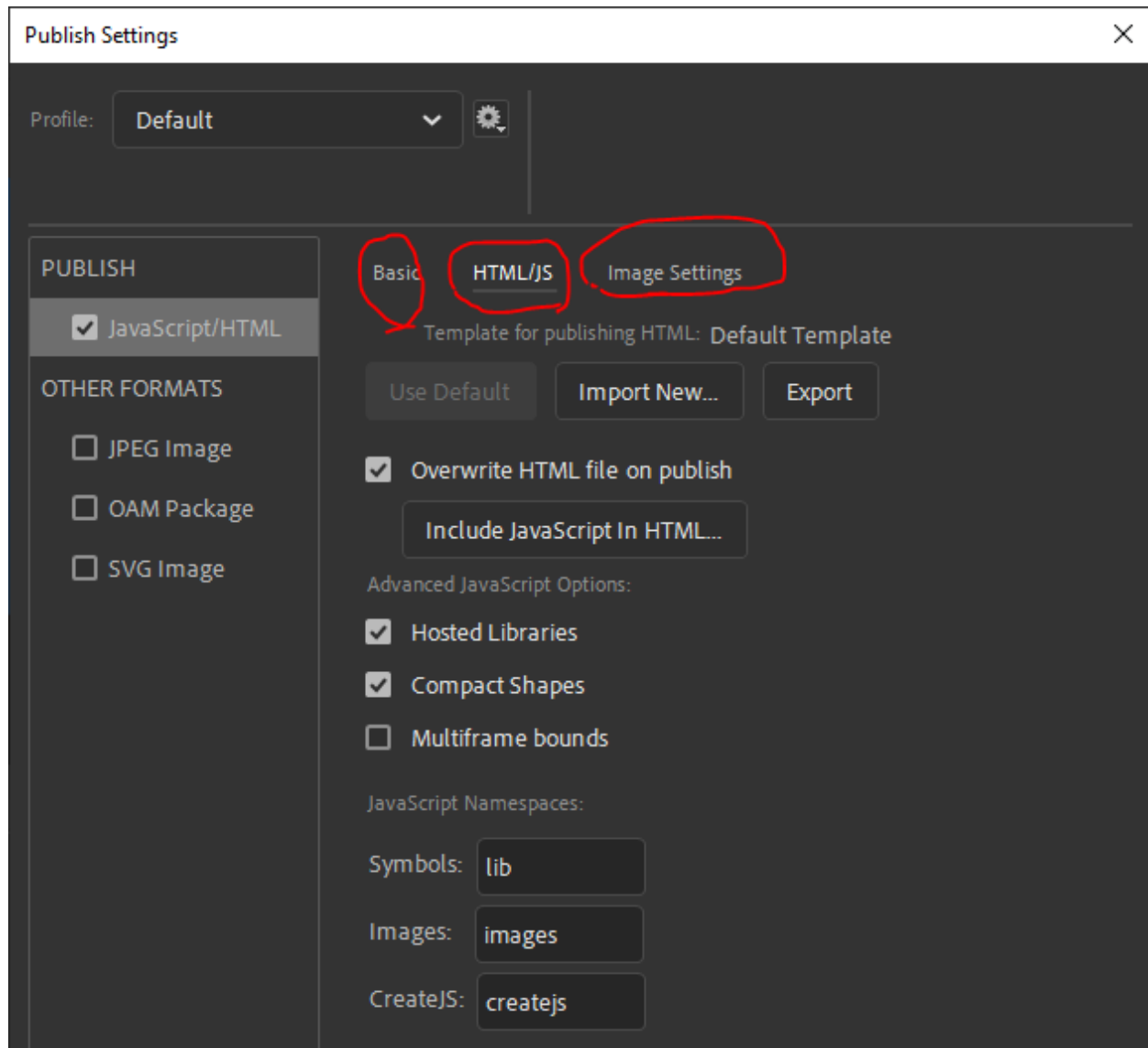❖ Now we can test our animation, as you can see the frame is in center for both vertical and horizontal.

Figure 27 HTML/JS and Image Settings