Web Animation

- **Image animation**
- **HTML5 + CSS**

Animated image files

- GIF and SVG let us create animated images using multiple frames (for example, using GIMP to create an animated GIF).

- SWF and Flash are vectorial image formats and also allow interaction, but are being replaced by HTML5+CSS+JS. Flash tools need a plugin installed on our browser.

- MNG is an open format for animated images derived from PNG so we have a bigger color palette than with GIFs.
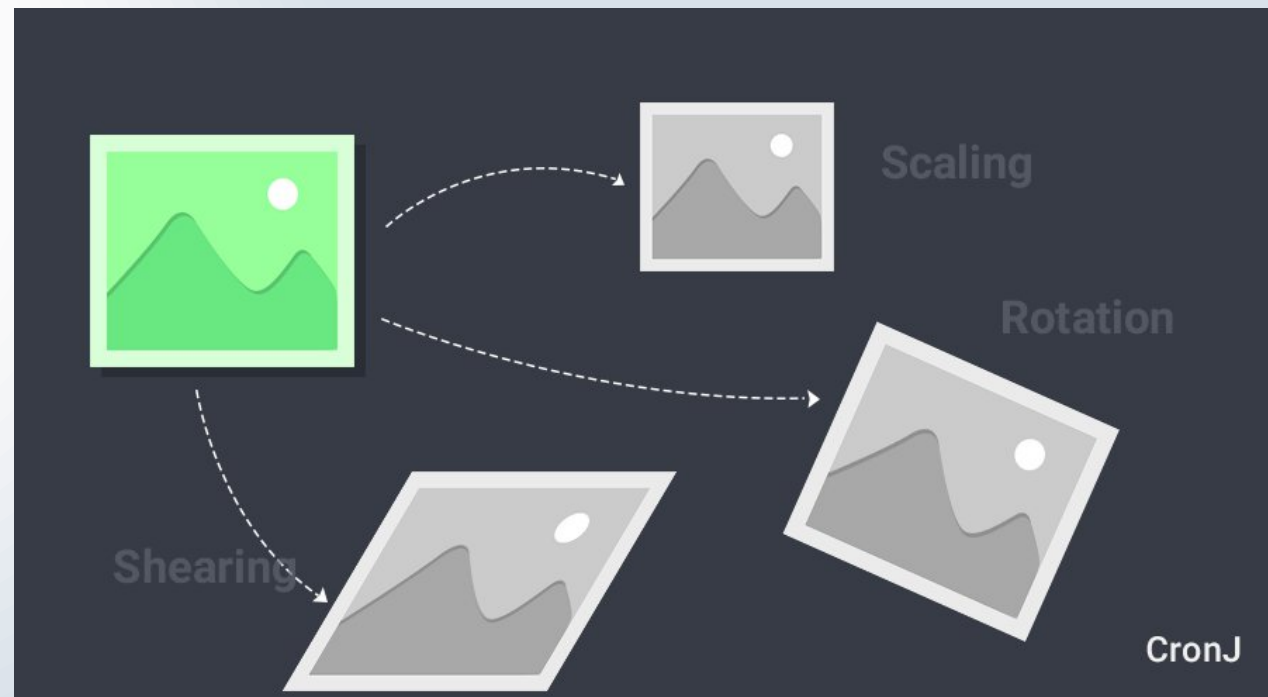
Animated images

- They are mainly used as (comercial) banners

- The variation in the animation is done by adding frames (layers) to the image.

- We can play the animation faster or slower varying the FPS of the image.

- There are different types of frames. Keyframes are the ones who contains one ore more objects and represents a change on the scene, compared with previous frames.

CSS Transforms

- CSS transforms allow you to move, rotate, scale and skew elements.

- We are modifying the relation of the elements with the axis of our viewport. The same effect as if we were looking at a stationary object while we are moving (a geometric transformation).

- We have 2D and 3D transforms

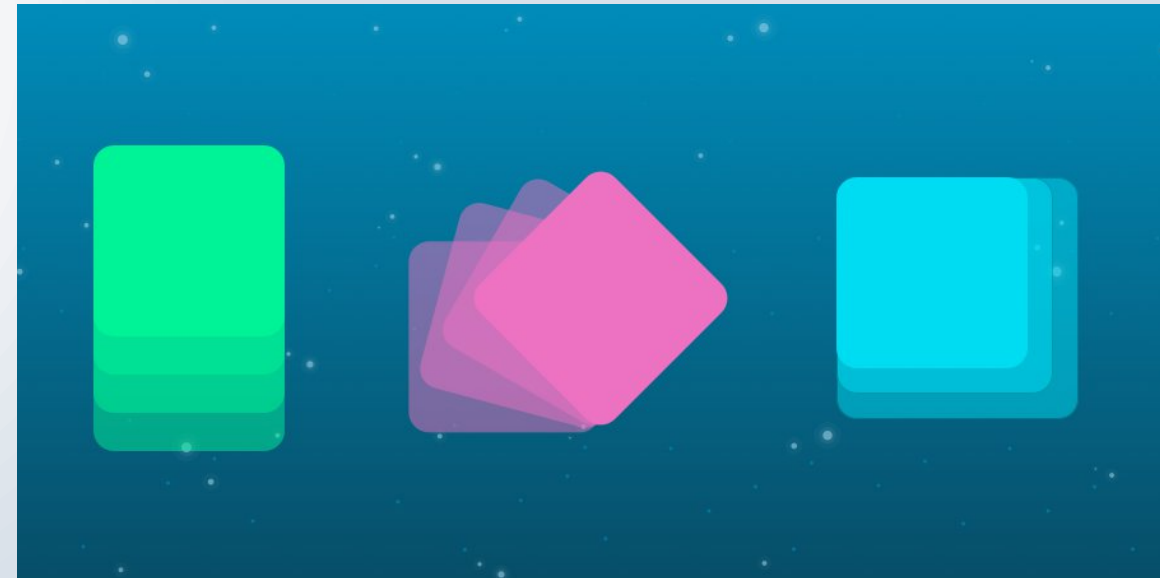Check https://www.w3schools.com/css/css3_2dtransforms.asp

CSS Transitions

- CSS transitions allows you to change property values smoothly, over a given duration. But only do a thing.

- Can modify several property values.

- Can set the duration, delay and speed curve of the transition.

- They can be combined with transformations.

- But they need to be triggered (hover, focus, programmaticaly adding and removing class values.

Check:
https://www.w3schools.com/css/css3_transitions.asp

CSS Animation

- The evolution of CSS give us tools to create animation over HTML elements (and there is no javascript or flash needed)

- These animations let us change from one style to another and don't need any explicit triggering.

- We need to define some keyframes that will hold what style the element has at certain times.
  - using "from" and "to" as 0% and 100% of the change
  - using percent (%) to create as many style changes as needed

Check https://www.w3schools.com/css/css3_animations.asp