

HTML5 Canvas

2018

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Source Codes

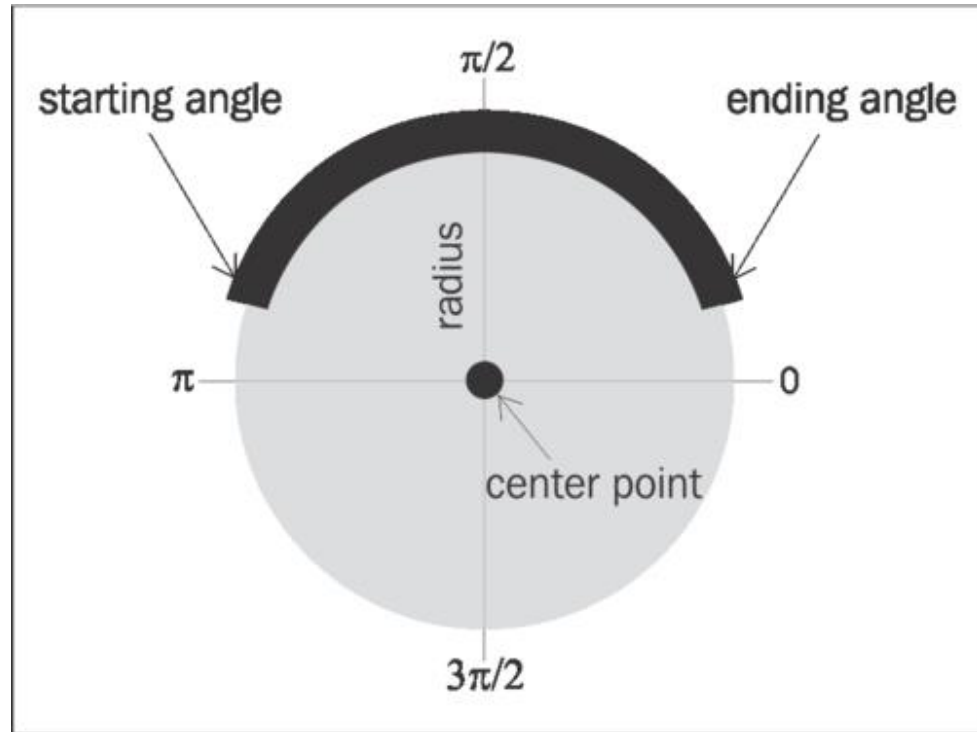
- Get the source codes for this course at <https://github.com/DSPMC/html5-canvas-sample>

Path & Text

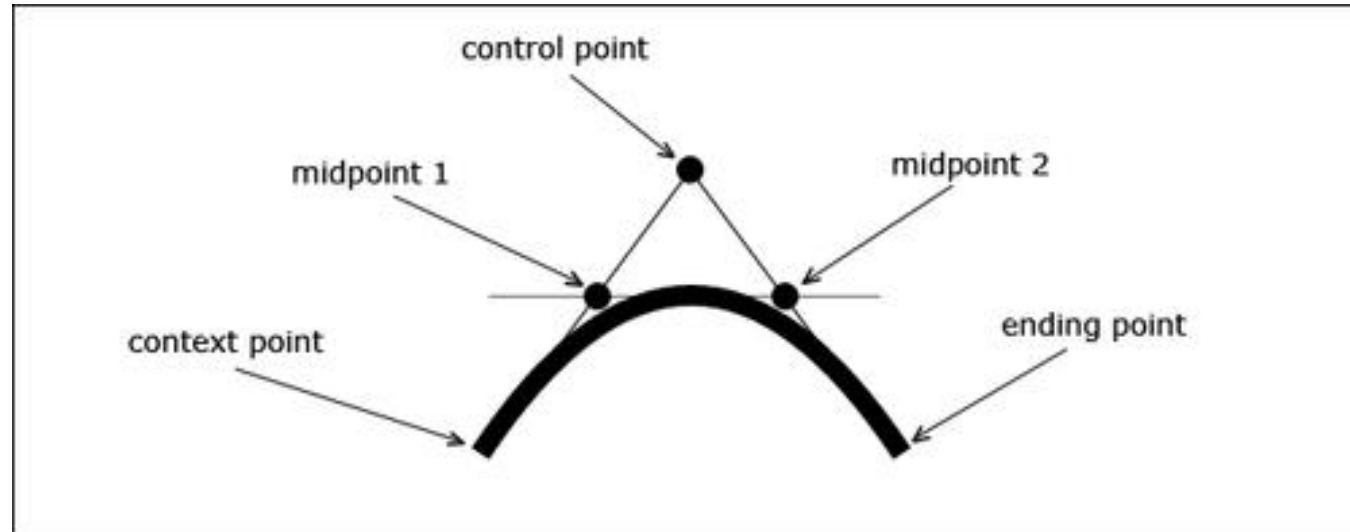
Line



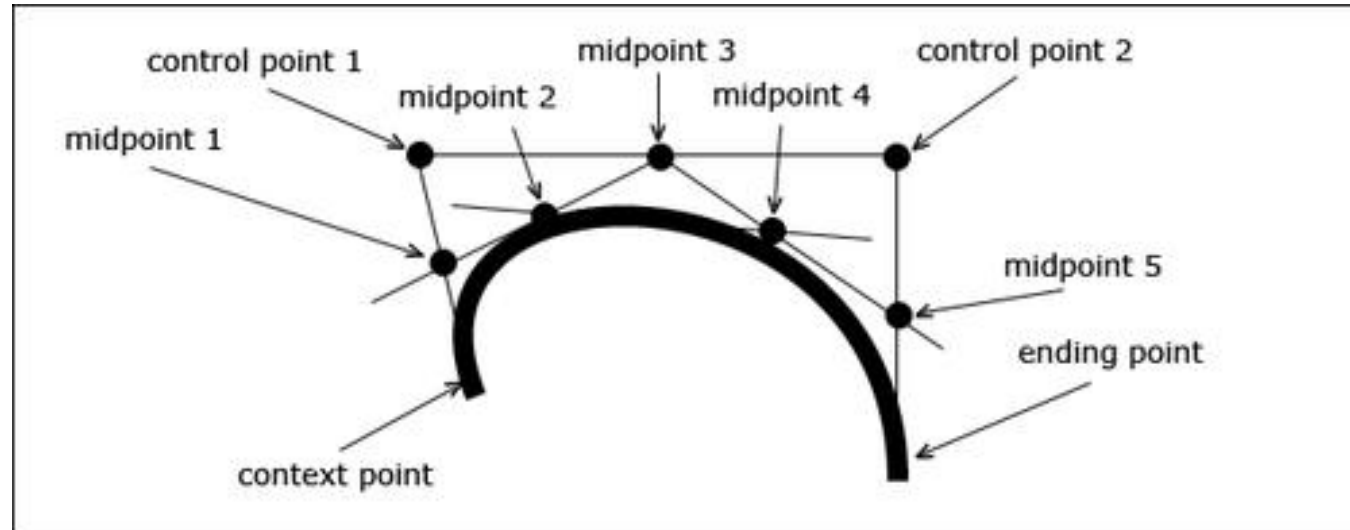
Arc



Quadratic Curve



Bezier Curve



Custom Line Drawing



Text

Hello World!

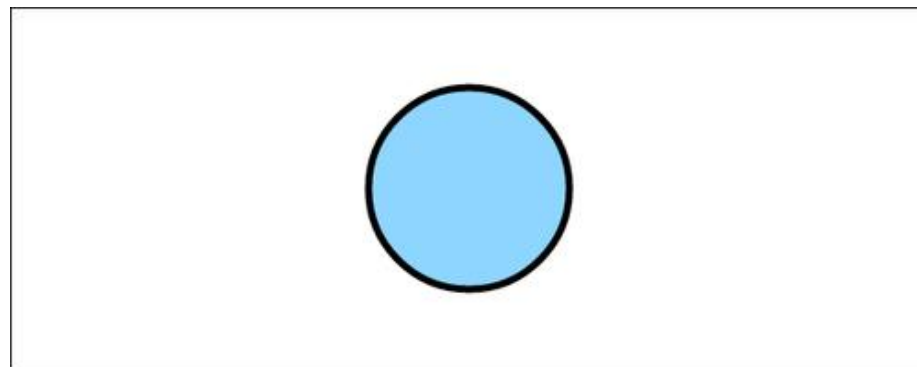
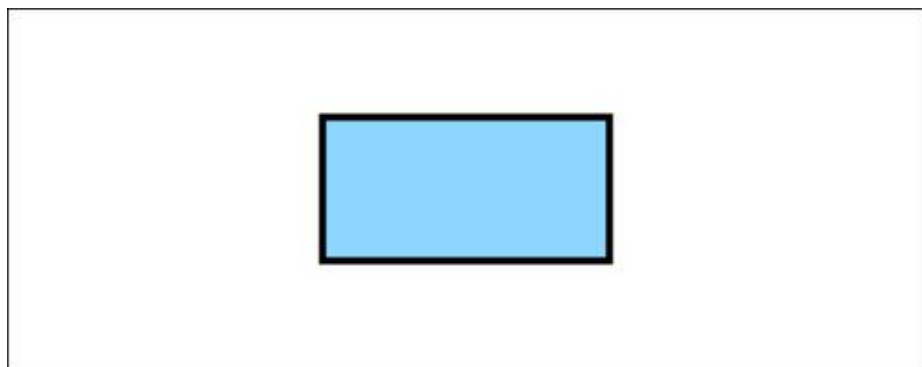
Hello 3D World!

Fractal Drawing

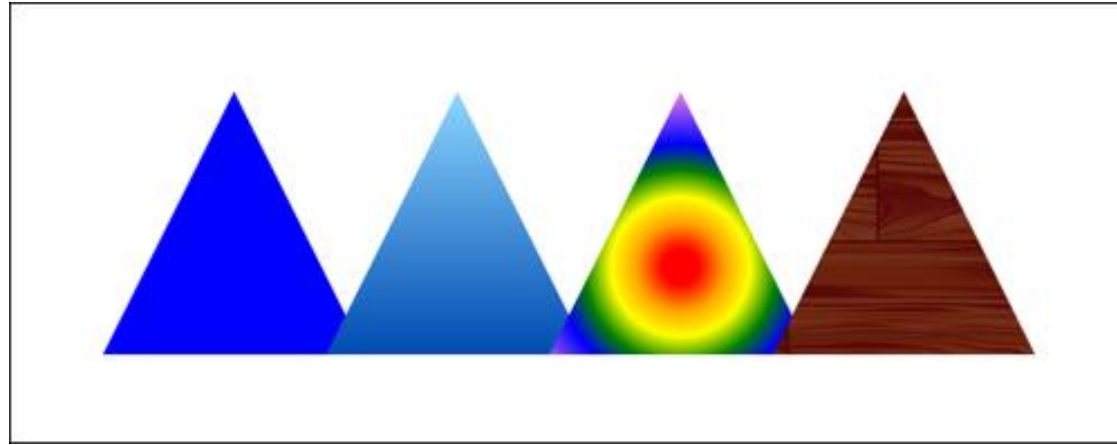


Shape

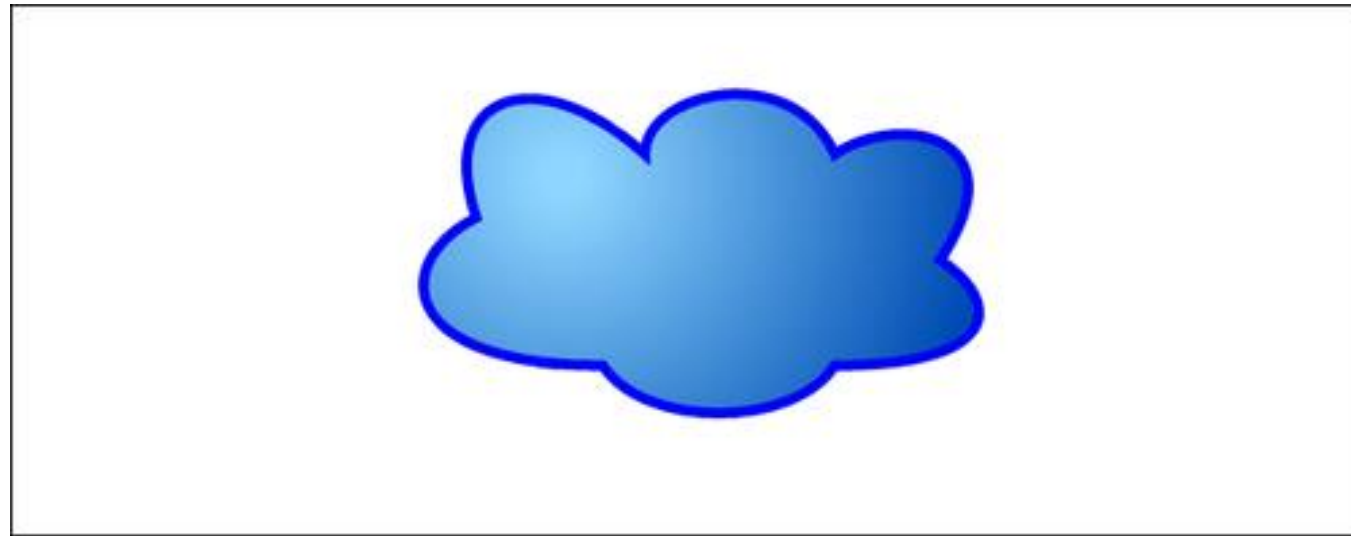
Basic Shape



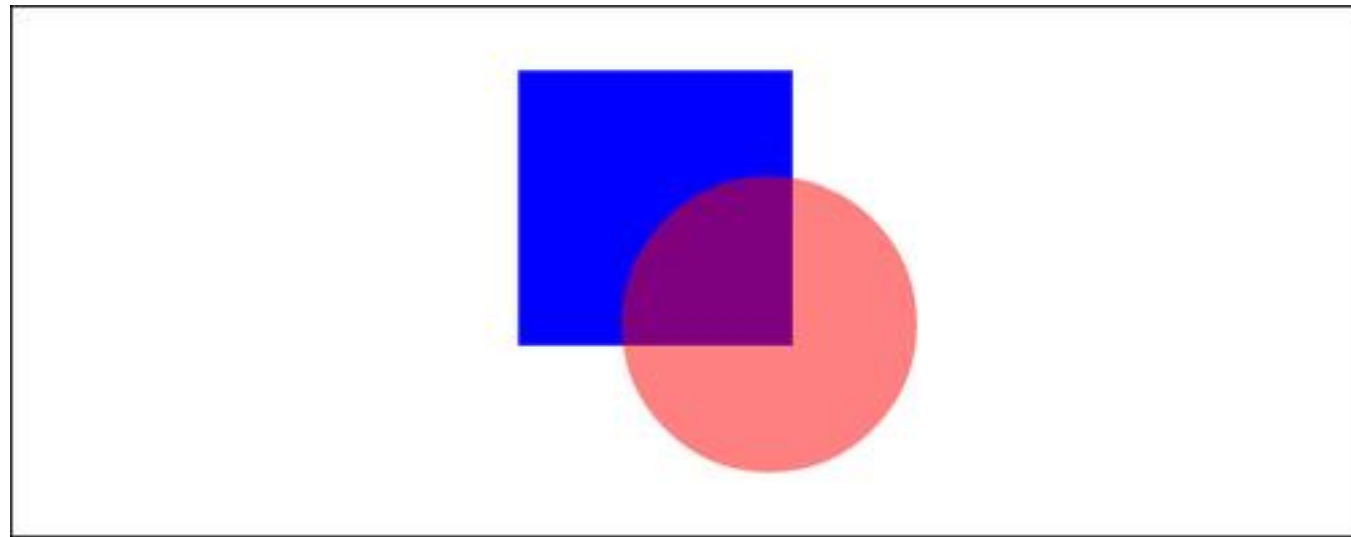
Fill Styles



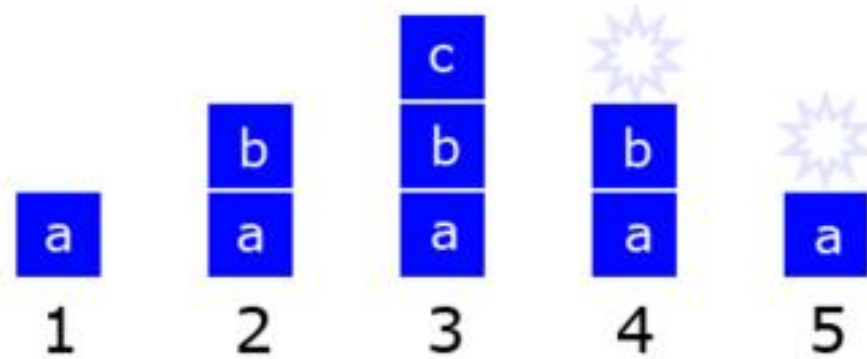
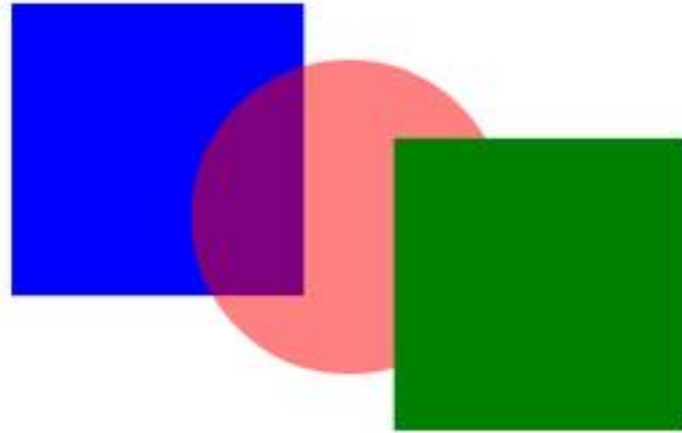
Creating Shape using Bezier Curve



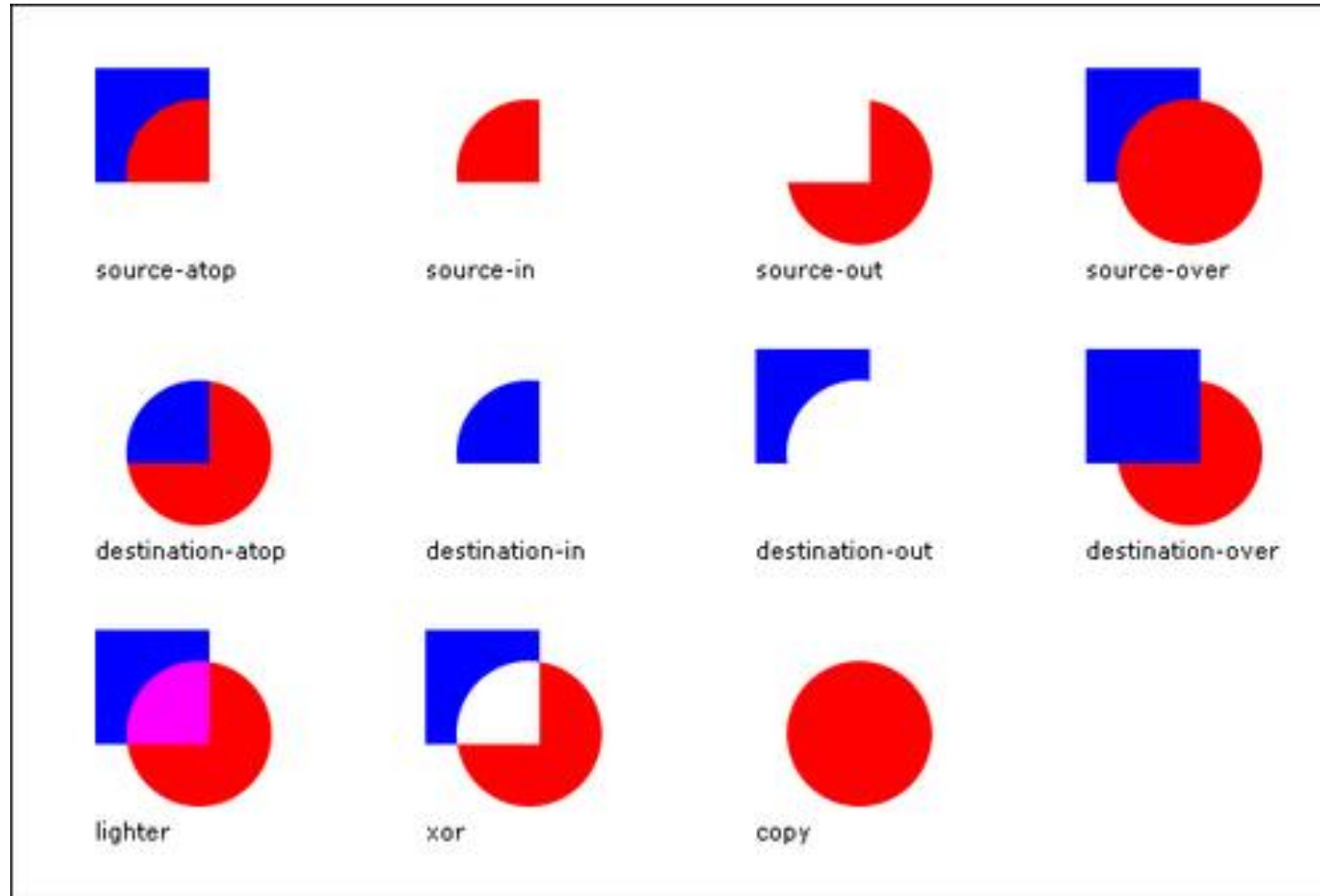
Transparency



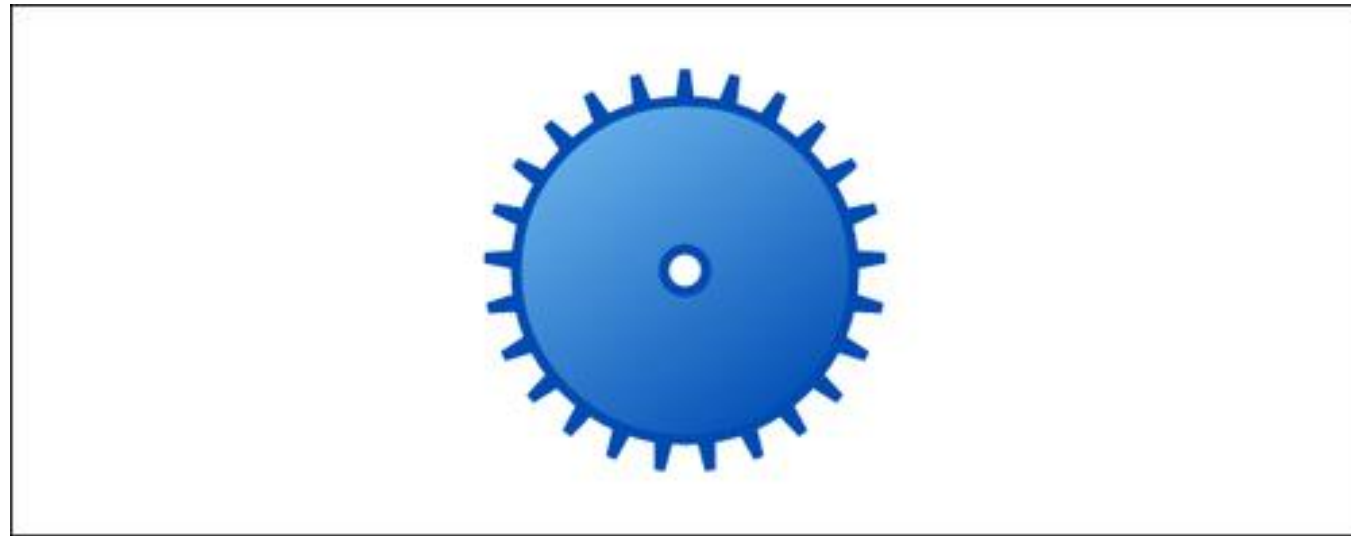
Context State



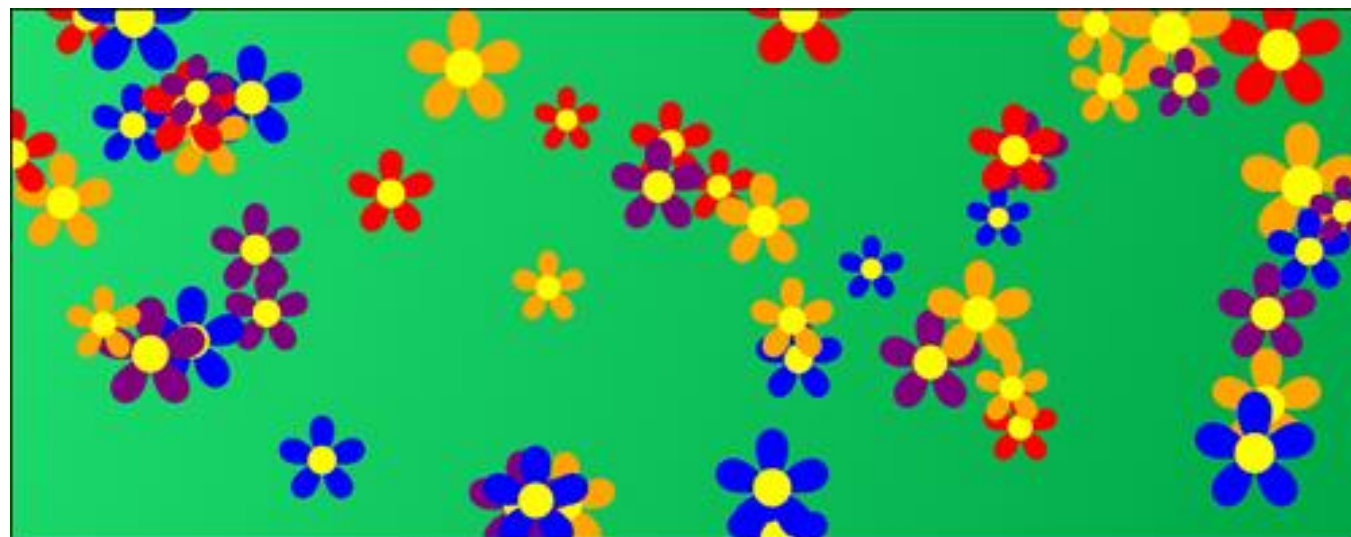
Composite Operation



More Shape



Randomizing



More Drawing

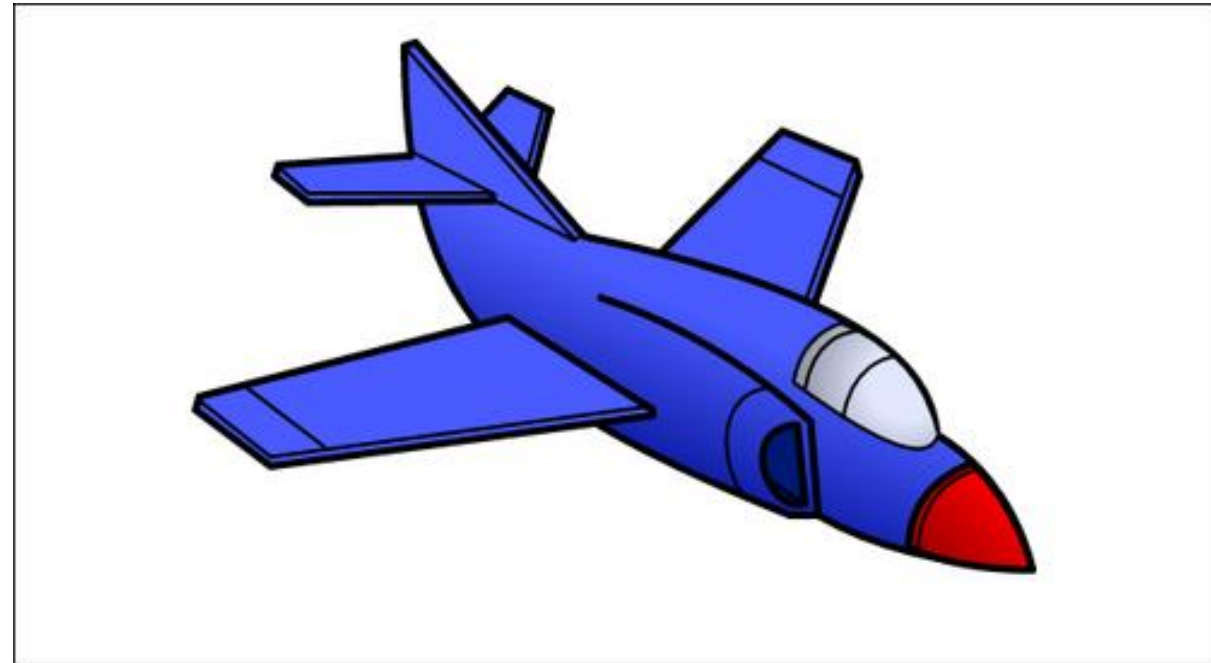
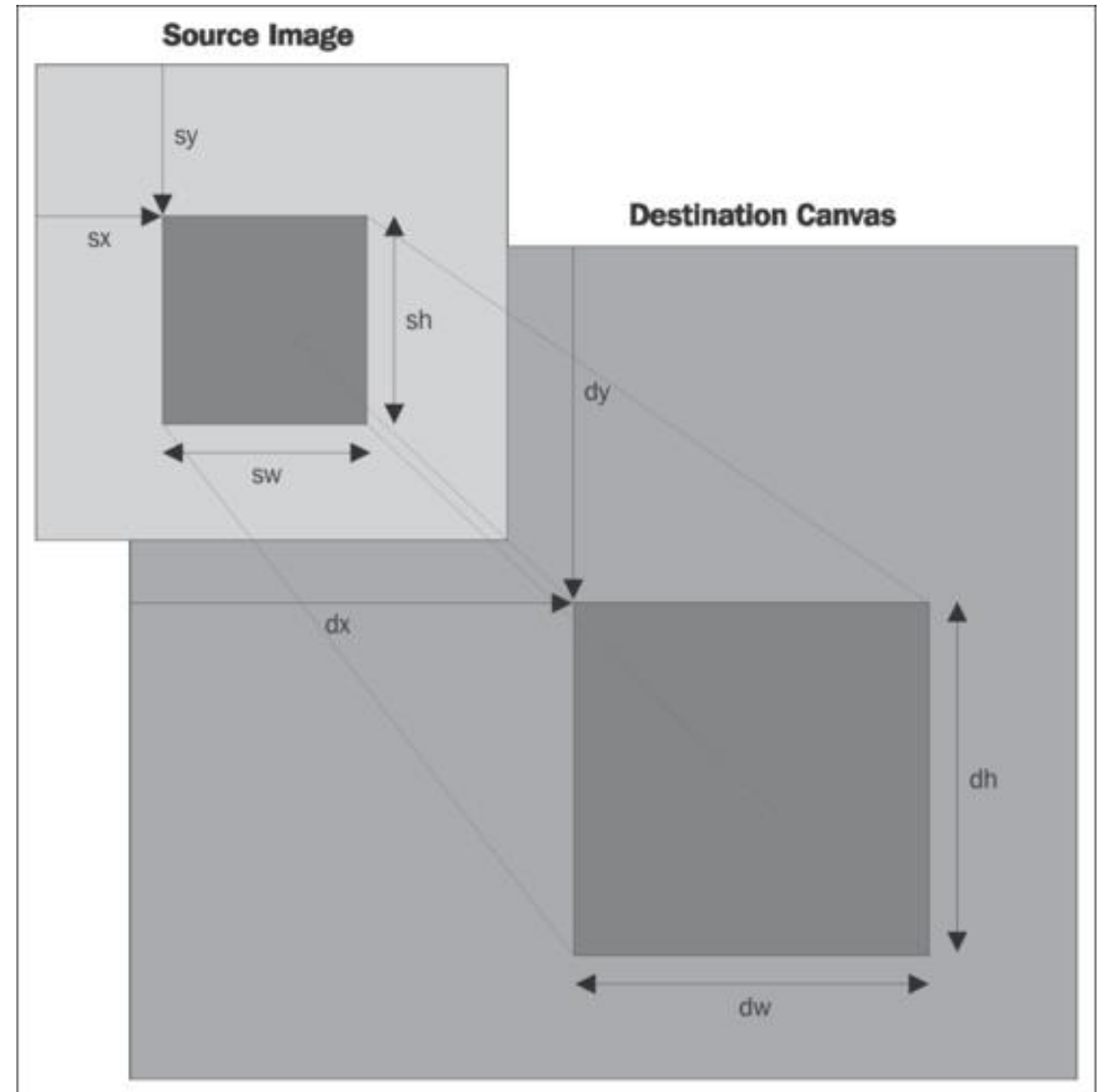


Image & Video

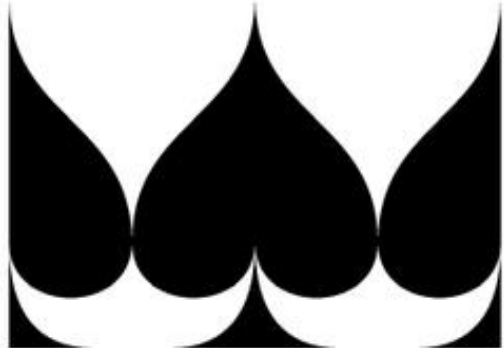
Image



Crop Image



Copy & Paste



Video



Image Data

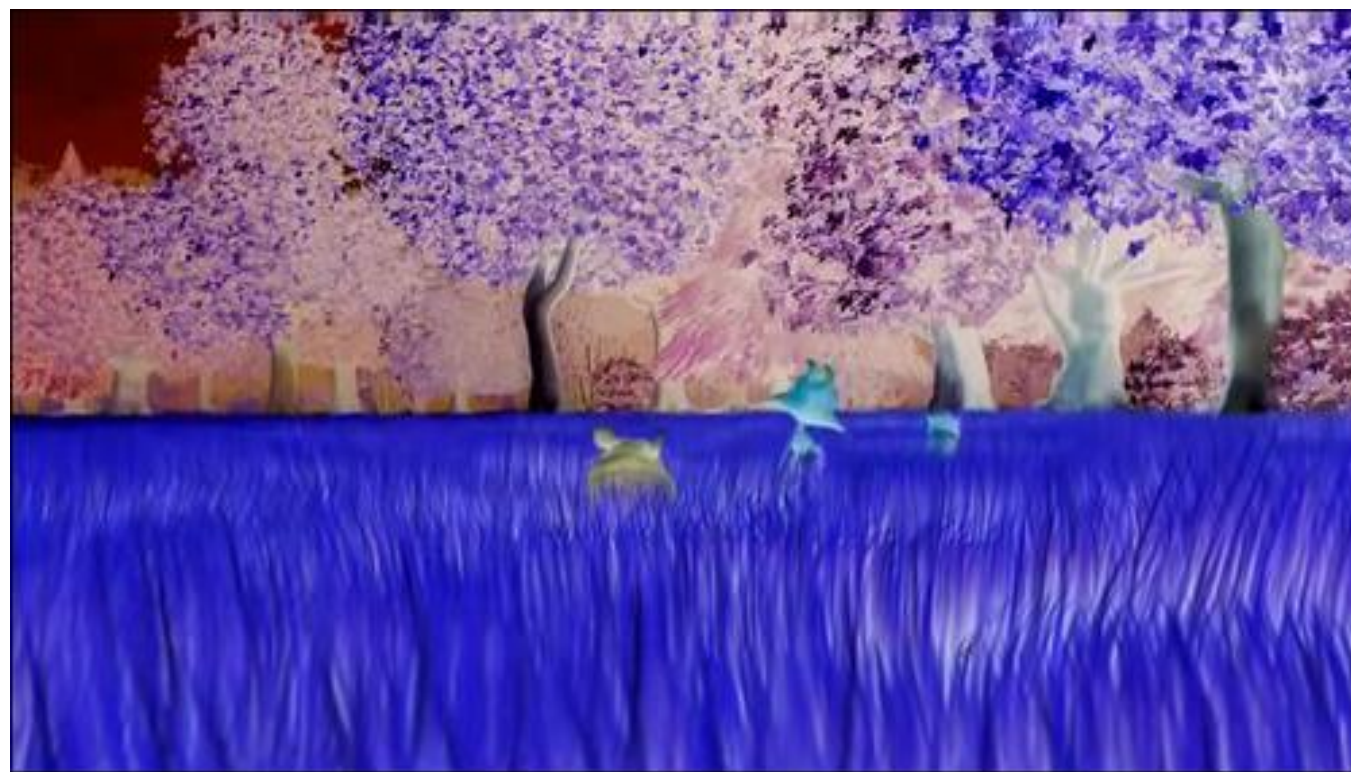
width=300, height=214, data length=256800



Filter Image



Filter Video



Convert Color



Data URL

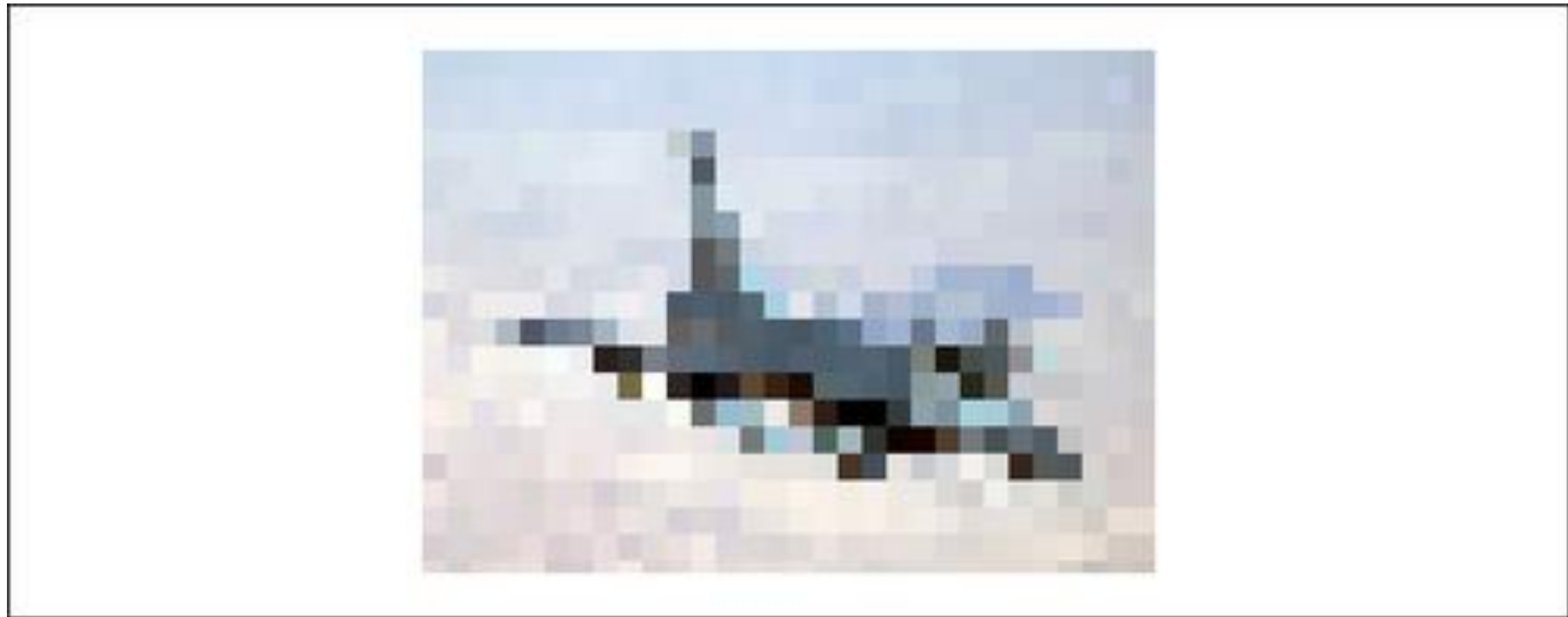
data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAlgAAAD6CAYAAAB9LTkQAAAgAEIEQVR4Xu3dXbAUxd3H8f+5i09VrEjuDIRFBSvoo1ETD/HmEcQIXskRc6FViaA+N7woRINJUDQm4kueeiS+INz4wEGfilwocLxSUASvDMf4XokpQbFKuAtYSdWT3PXz/885C3t2Z3dndntme3q+W7UehN2e7k/3sj96enpGhAcCCCCAAAI IICAV4ERr6VRGAI IIIAAAaggglAQsBgECCCAA IIIICAZwECI mdQikMAAQQQQAABBAhYjAE EEEAAAQQQMCzAAHLMyjFIYAAAagg ggAACBCzGAA IIIAAAagg4FmAgOUZIOIQQAABBBBAAAECFmMAA QQQQAABBBdwLEDA8gxKcQgggAACCCCAAAGLMYAAAagggAACCHgWI

Save and Load Canvas Data

```
data:image/png;base64,iVBORw0KG  
goAAAANSUUhEUgAAAlg  
AAAD6CAYAAAB9LTkQAAAgAEIEQVR  
4Xu3dXbAUxd3H8f+5i09  
VrEjuDIRFBSvoo1ETD/HmEcQIXskRc6  
FViaA+N7woRINJUDQm4  
kueeiS+INz4wEGfilwocLxSUASvDMf4  
XokpQbFKuAtYSdWT3PXz  
/885C3t2Z3dndntme3q+W7UehN2e  
7k/3sj96enpGhAcCCCCAAAI  
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CCCCAAIIICAZwECI
```

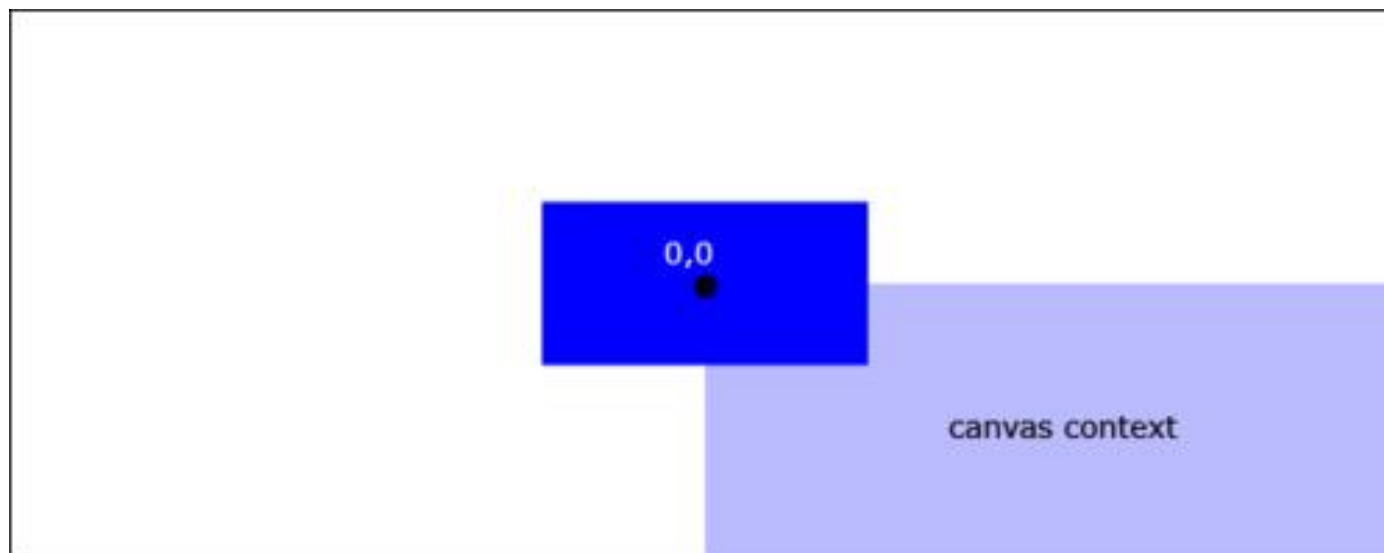


Pixelated

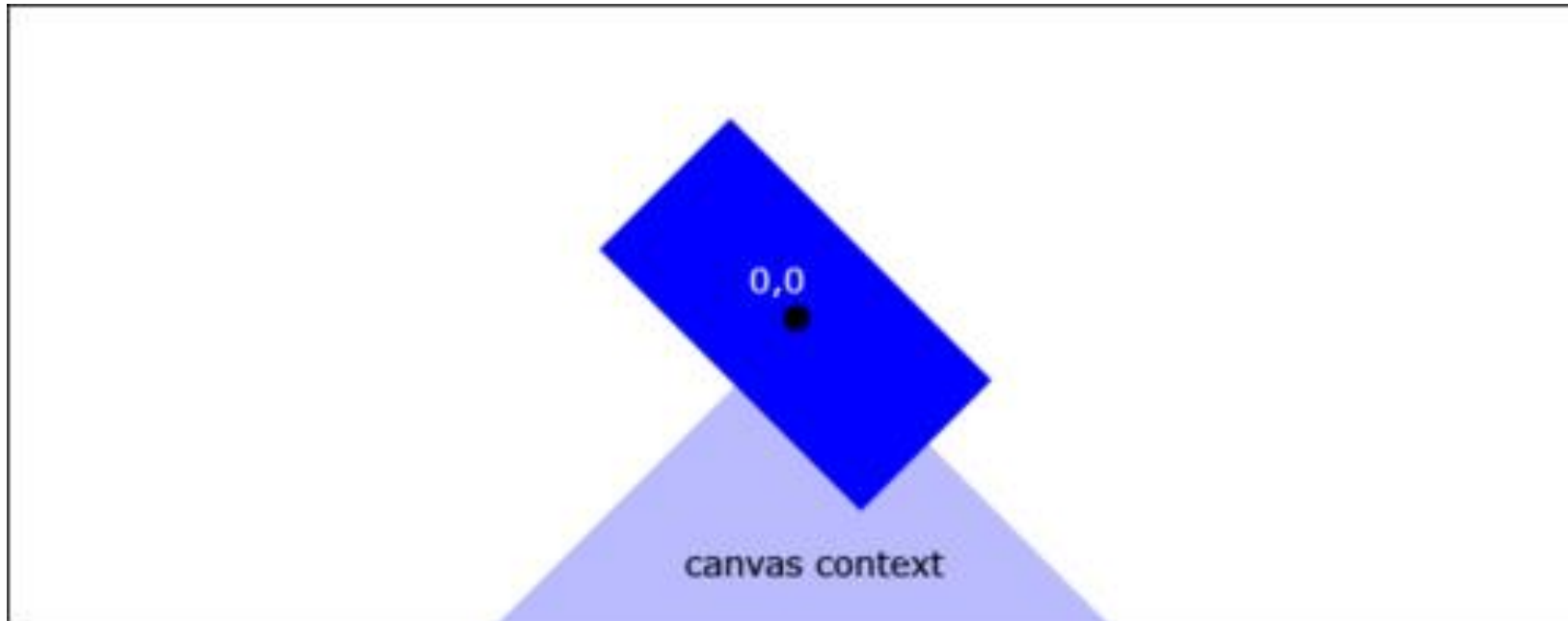


Transformation

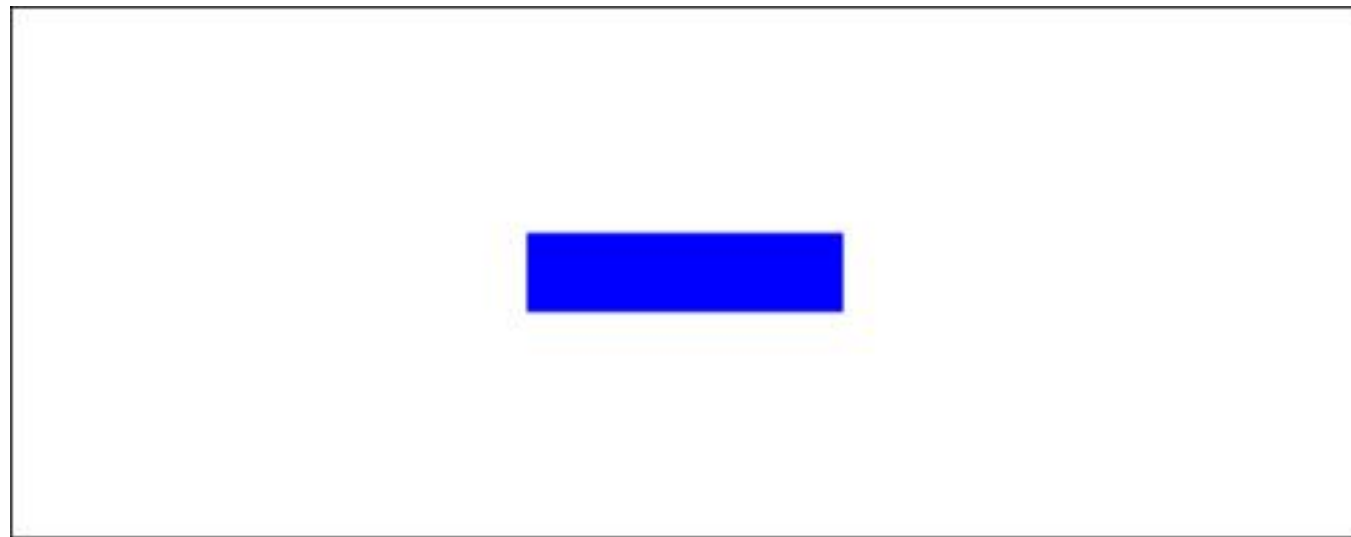
Translating



Rotating



Scaling



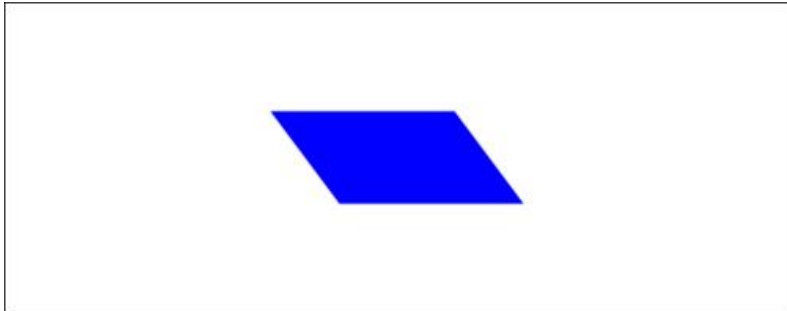
Mirror

!bhoW olleH

Custom

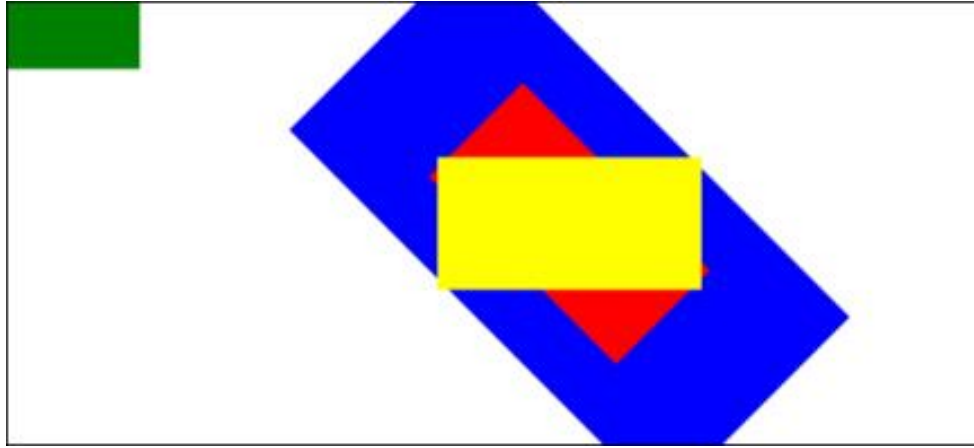
$$\begin{bmatrix} x' \\ y' \\ 1 \end{bmatrix} = \begin{bmatrix} 1 & 0 & t_x \\ 0 & 1 & t_y \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \\ 1 \end{bmatrix}$$

Shearing



$$\begin{bmatrix} x' \\ y' \\ 1 \end{bmatrix} = \begin{bmatrix} 1 & s_x & 0 \\ s_y & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \\ 1 \end{bmatrix}$$

More Transform



Hello Logo!

Hello Logo!

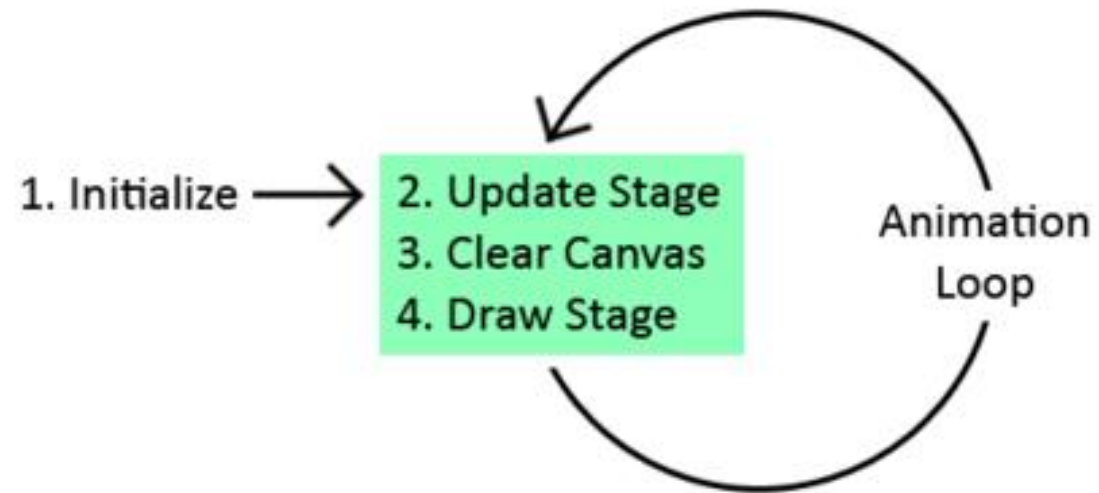
Hello Logo!

Hello Logo!

Hello Logo!

Animations

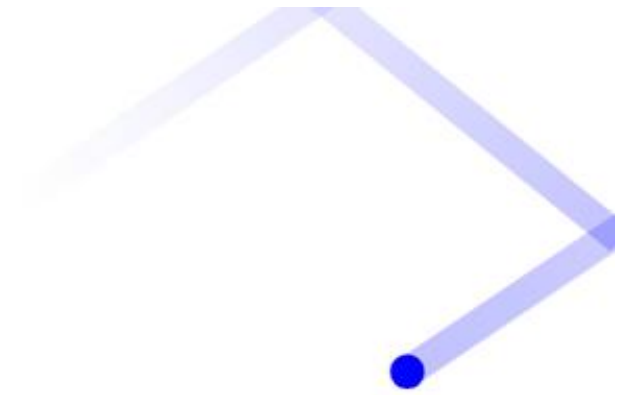
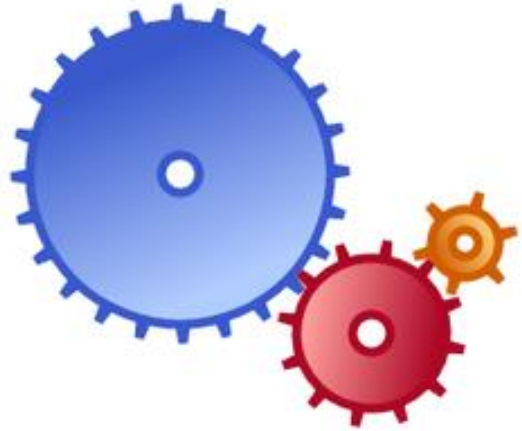
Animation



Motions



More Motions



Events

Event

Although most of the recipes in this chapter utilize mouse events, they can also be modified to support mobile touch events by replacing **mousedown** with **touchstart**, **mouseup** with **touchend**, and **mousemove** with **touchmove**.

Reference

- HTML5 Canvas Cookbook by Eric Rowell, 2011