# Frameworks for Graphics

## Easier working with Canvas

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# KineticJS (Overview and Setup)

# KineticJS Overview

* KineticJS is a JavaScript framework to work with the Canvas
  + Introduces a refined API for canvas functionality
  + Has stages and layers for better canvas performance
    - Layers contain different sets of objects that can be used together

# KineticJS Setup

* To use KineticJS:
* Download the kinetic.js framework from the site
* At <http://kineticjs.com/>
* Include the framework into your HTML page:

<script src="scripts/…/kinetic-vX.X.X.js"></script>

* Create a div with ID, where you want the canvas to be initialized:

<div id="canvas-container"></div>

* To use KineticJS (cont.):
  + Do the following in the script:

function initKinetic(){

var stage = new Kinetic.Stage({

container: 'canvas-container',

width: 450,

height: 350

});

var layer = new Kinetic.Layer();

var rect = new Kinetic.Rect(options);

var circle = new Kinetic.Circle(options);

layer.add (rect);

layer.add (circle);

stage.add(layer);

}

# *Setting up KineticJS - Live Demo*

# Drawing Shapes with KineticJS (Rects, Circles, Line, etc...)

* KineticJS has all the default shapes from Canvas, and some more:

|  |  |
| --- | --- |
| Rectangular | Circle |
| rect = new Kinetic.Rect({  fill: 'yellowgreen',  stroke: '#CCCCCC',  x: 250,  y: 350,  width: 57,  height: 93  }); | circle = new Kinetic.Circle({  radius: 45,  fill: 'purple',  stroke: 'blue',  strokeWidth: 3,  x: 450,  y: 350,  }); |

* KineticJS has all the default shapes from Canvas, and some more:

|  |  |
| --- | --- |
| Straight line | Curved line |
| straight = new Kinetic.Line({  points: [x1, y1, x2, y2],  stroke: 'green',  strokeWidth: 2,  lineJoin: 'round'  }); | curved = new Kinetic.Line({  points: [x1, y1, x2, y2],  stroke: 'green',  strokeWidth: 2,  tension: 1  }); |

* KineticJS has all the default shapes from Canvas, and some more:

|  |  |
| --- | --- |
| Polygon | Blob |
| polygon = new Kinetic.Line({  points: [ … ]  stroke: 'green',  fill: 'yellowgreen'  strokeWidth: 2,  closed: true  }); | blob = new Kinetic.Line({  points: [ … ],  stroke: 'green',  fill: 'purple',  closed: true,  tension: 0.5  }); |

# *Drawing Shapes - Live Demo*