Telerik Academy

KineticJS

Doing the Canvas the "easy way"!

Telerik Software Academy

Learning & Development

http://academy.telerik.com

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KineticJS

Overview and Setup

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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

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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>
```

KineticJS Setup (2)

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

```
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);
```

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Create a stage using the div id

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Create a stage using the div id

Create a layer to add shapes

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Create a layer to add shapes

Create shapes

Add the shapes to the layer

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Create a stage using the div id

Create a layer to add shapes

Create shapes

Add the shapes to the layer

Add the layer to the stage

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Setting up KineticJS

Live Demo

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Drawing Shapes with KineticJS

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Drawing Shapes with KineticJS

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

```
rect = new Kinetic.Rect({
  fill: 'yellowgreen',
  stroke: '#CCCCCC',
  x: 250,
  y: 350,
  width: 57,
  height: 93
});
```

  - Circle

```
circle = new Kinetic.Circle({
  radius: 45,
  fill: 'purple',
  stroke: 'blue',
  strokeWidth: 3,
  x: 450,
  y: 350,
});
```

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Drawing Shapes with KineticJS: Rect and Circle

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

```
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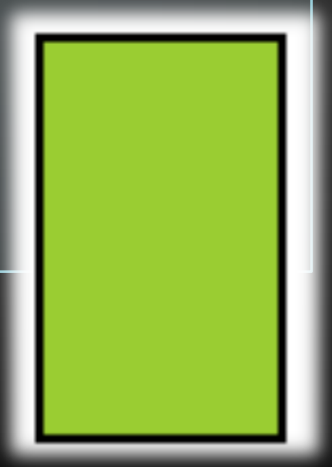

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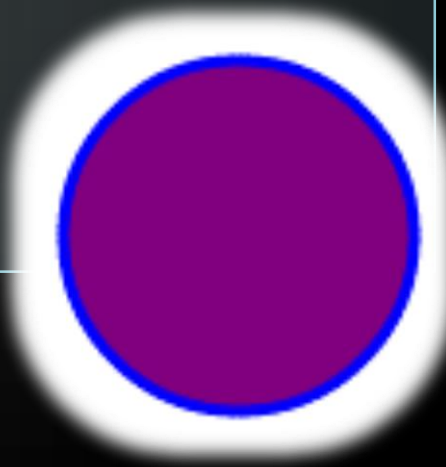

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Drawing Shapes with KineticJS: Straight and Curved Line

- KineticJS has all the default shapes from Canvas, and some more:
  - Straight line

```
straight = new Kinetic.Line({
  points: [x1, y1, x2, y2],
  stroke: 'green',
  strokeWidth: 2,
  lineJoin: 'round'
});
```

  - Curved line

```
curved = new Kinetic.Line({
  points: [x1, y1, x2, y2],
  stroke: 'green',
  strokeWidth: 2,
  tension: 1
});
```

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  - Straight line

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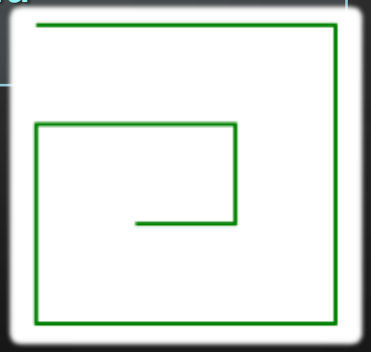

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  tension: 1
});
```

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Drawing Shapes with KineticJS: Polygon and Blob

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

```
polygon = new Kinetic.Line({
  points: [ … ]
  stroke: 'green',
  fill: 'yellowgreen'
  strokeWidth: 2,
  closed: true
});
```

  - Blob

```
blob = new Kinetic.Line({
  points: [ … ],
  stroke: 'green',
  fill: 'purple',
  closed: true,
  tension: 0.5
});
```

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Drawing Shapes with KineticJS: Polygon and Blob

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

```
polygon = new Kinetic.Line({
  points: [ … ]
  stroke: 'green',
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  strokeWidth: 2,
  closed: true
});
```
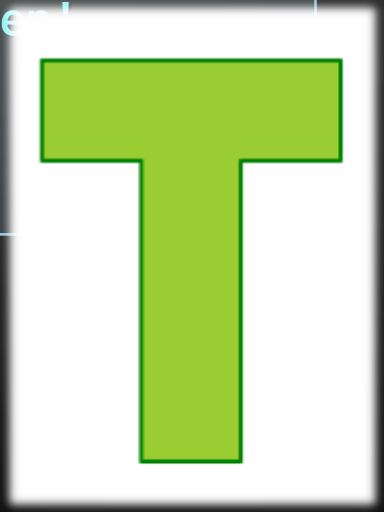
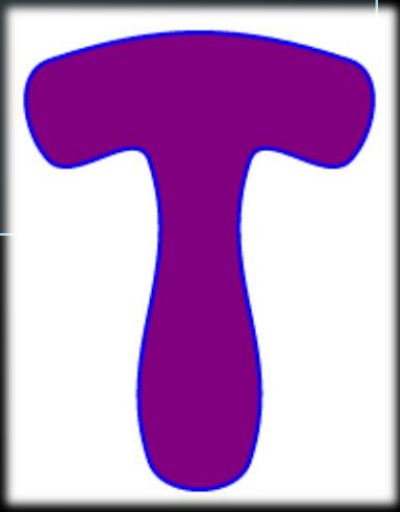



  - Blob

```
blob = new Kinetic.Line({
  points: [ … ],
  stroke: 'green',
  fill: 'purple',
  closed: true,
  tension: 0.5
});
```



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Drawing Shapes

Live Demo

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KineticJS Overview

http://academy.telerik.com

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Homework

1. Read the tutorial on KineticJS:
   - At http://www.html5canvastutorials.com/kineticjs/html5-canvas-events-tutorials-introduction-with-kineticjs/
   - Read about custom shapes and text
2. Using Kinetic create a family tree

```
var familyMembers = [{
  mother: 'Maria Petrova',
  father: 'Georgi Petrov',
  children: ['Teodora Petrova',
             'Peter Petrov']
}, {
  mother: 'Petra Stamatova',
  father: Todor Stamatov',
  children: ['Maria Petrova']
}]
```