

Text

```
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>
```

Another properties

```
ctx.textBaseline = "top"; //text bottom x,y
ctx.textBaseline = "bottom"; //text top x,y
```

```
<body>
  <canvas id="myCanvas" width="200" height="400" style="border:1px solid #d3d3d3;">
    Your browser does not support the canvas element.
  </canvas>
```

```
<script>
```

```
var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");
```

Get canvas id **myCanvas**
and
prepare to make object 2D

```
ctx.font = "30px Arial"; //set fontsize & fonttype
```

```
ctx.fillText("Hello World",10,40);
```

```
ctx.strokeText("Hello World",10,80);
```

```
ctx.fillStyle = "red";
```

```
ctx.textAlign = "center";
```

```
ctx.fillText("Hello World", canvas.width/2, canvas.height/2);
```

```
</script>
```

```
</body>
</html>
```

Hello World
Hello World

Hello World

F5 browser

Text (function)

index.js

```

var canvas=document.getElementById("myCanvas");
var ctx=canvas.getContext("2d");

var drawFillText = function(itsFont,itsFillText,itsFillStyle,itsPosX,itsPosY) // function 1
{
    ctx.textBaseline = "top";
    ctx.font = itsFont;
    ctx.fillStyle = itsFillStyle;
    ctx.fillText(itsFillText,itsPosX,itsPosY);
}

var drawStrokeText = function(itsFont,itsStrokeText,itsStrokeStyle,itsPosX,itsPosY) // function 2
{
    ctx.textBaseline = "top";
    ctx.font = itsFont;
    ctx.strokeStyle = itsStrokeStyle;
    ctx.strokeText(itsStrokeText,itsPosX,itsPosY);
}

```

index.html

```

<!DOCTYPE html>
<html lang = "en">
<head><title>CANVAS</title>
    <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid grey;">
    Your browser does not support the canvas element
</canvas>

<script src="index.js"></script>

<script>
    drawFillText("30px Arial", "Javascript", "red",0,0); // call function 1
    drawStrokeText("70px Arial", "HTML CSS","red",60, 50); // call function 2
</script>

</body>
</html>

```

Javascript

HTML CSS

Text (object custom constructor)

index.js

```

var canvas=document.getElementById("myCanvas");
var ctx=canvas.getContext("2d");

var DrawText = function() //custom constructor/class
{
    ctx.textBaseline = "top";

    this.theFill = function(itsFont,itsFillStyle,itsFillText,itsPosX,itsPosY) // method 1
    {
        ctx.font = itsFont;
        ctx.fillStyle = itsFillStyle;
        ctx.fillText(itsFillText,itsPosX,itsPosY);
    }

    this.theStroke = function(itsFont,itsStrokeStyle,itsStrokeText,itsPosX,itsPosY) // method 2
    {
        ctx.font=itsFont;
        ctx.strokeStyle = itsStrokeStyle;
        ctx.strokeText(itsStrokeText,itsPosX,itsPosY);
    }
};

```

index.html

```

<!DOCTYPE html>
<html lang = "en">
<head><title>CANVAS</title>
    <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid grey;">
    Your browser does not support the canvas element
</canvas>

<script src="index.js"></script>

<script>
    var text1 = new DrawText() // new instance
    var text2 = new DrawText() // new instance
    text1.theFill("30px sans", "Red", "Javascript", 70, 70) // new instance call method 1
    text2.theStroke("20px arial", "Brown", "HTML CSS", 0,0) // new instance call method 2
</script>

</body>
</html>

```

HTML CSS

Javascript

Text Fill and Stroke (object custom constructor)

index.js

```
var canvas=document.getElementById("myCanvas");
var ctx=canvas.getContext("2d");

var DrawText = function() //custom constructor/class
{
    ctx.textBaseline = "top";

    this.theFillStrokeText=function(itsFont,itsFillStyle,itsStrokeStyle,itsFillText, itsStrokeText, itsPosX,itsPosY)
    {
        ctx.font = itsFont;
        ctx.fillStyle = itsFillStyle;
        ctx.strokeStyle = itsStrokeStyle;
        ctx.fillText(itsFillText,itsPosX,itsPosY);
        ctx.strokeText(itsStrokeText,itsPosX,itsPosY);
    }
};
```

index.html

```
<!DOCTYPE html>
<html lang = "en">
<head><title>CANVAS</title>
    <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid grey;">
    Your browser does not support the canvas element
</canvas>

<script src="index.js"></script>

<script>
    var text1 = new DrawText() // new instance
    text1.theFillStrokeText("30px sans", "Green", "Yellow", "Javascript", "Javascript", 70, 70)
</script>

</body>
</html>
```



Linear gradient

<body>

<canvas id="myCanvas" width="800" height="600" style="border:1px solid ">

Your browser does not support the canvas element.

</canvas>

<script>

var canvas = document.getElementById("myCanvas");

var ctx = canvas.getContext("2d");

var grad = ctx.createLinearGradient(0,0,200,0);

grad.addColorStop(0,"yellow"); //yellow

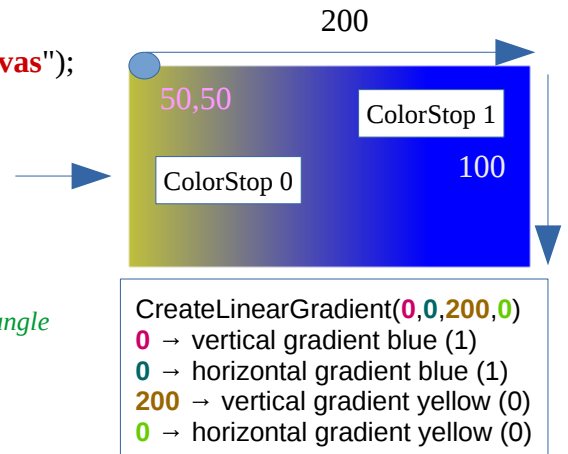
grad.addColorStop(1,"blue"); //blue

ctx.fillStyle = grad; //fill rectangle color width grad

ctx.fillRect(50,50,200,100); //x,y,width,height rectangle

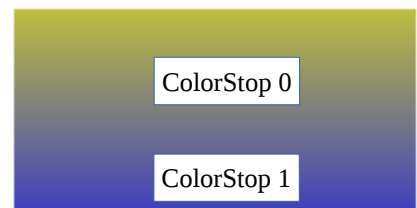
</script>

</body>



var grad = ctx.createLinearGradient(0,0,0,200);

CreateLinearGradient(0,0,0,200)
 0 → vertical gradient blue (1)
 0 → horizontal gradient blue (1)
 0 → vertical gradient yellow (0)
 200 → horizontal gradient yellow (0)



var grad = ctx.createLinearGradient(200,0,0,0);

CreateLinearGradient(200,0,0,0)
 200 → vertical gradient blue (1)
 0 → horizontal gradient blue (1)
 0 → vertical gradient yellow (0)
 0 → horizontal gradient yellow (0)



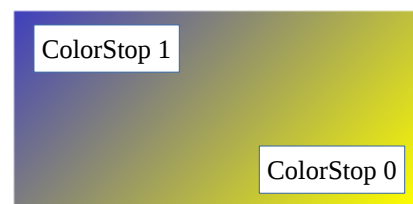
var grad = ctx.createLinearGradient(0,200,0,0);

CreateLinearGradient(0,200,0,0)
 0 → vertical gradient blue (1)
 200 → horizontal gradient blue (1)
 0 → vertical gradient yellow (0)
 0 → horizontal gradient yellow (0)



var grad = ctx.createLinearGradient(200,200,0,0);

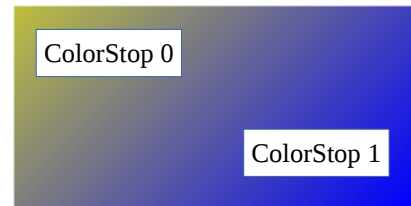
CreateLinearGradient(200,200,0,0)
 200 → vertical gradient blue (1)
 200 → horizontal gradient blue (1)
 0 → vertical gradient yellow (0)
 0 → horizontal gradient yellow (0)



Canvas

```
var grad = ctx.createLinearGradient(0,0,200,200);
```

CreateLinearGradient(0,0,200,200)
0 → vertical gradient blue (1)
0 → horizontal gradient blue (1)
200 → vertical gradient yellow (0)
200 → horizontal gradient yellow (0)



```
var grad = ctx.createLinearGradient(0,0,200,200);
```

```
grad.addColorStop(0,"yellow");  
grad.addColorStop(0.5,"white");  
grad.addColorStop(0.7,"orange");  
grad.addColorStop(0.9,"white");  
grad.addColorStop(1,"blue");
```



Radial gradient

```
<body>
```

```
<canvas id="myCanvas" width="800" height="600" style="border:1px solid ">
```

Your browser does not support the canvas element.

```
</canvas>
```

```
<script>
```

```
var canvas = document.getElementById("myCanvas");
```

```
var ctx = canvas.getContext("2d");
```

```
var grad = ctx.createRadialGradient(130,130,20,180,180,100); //x1,y1,radius1,x2,y2,radius2
```

```
grad.addColorStop(0,"yellow");
```

```
grad.addColorStop(1,"blue");
```

```
ctx.fillStyle = grad; //fill rectangle color width grad
```

```
ctx.fillRect(50,50,200,100); //x,y,width,height rectangle
```

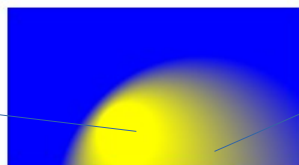
```
</script>
```

```
</body>
```

createRadialGradient(130,130,20,180,180,100)

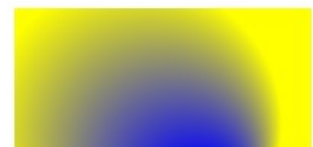
x1,y1 = 130,130

radius = 20



x2,y2 = 180,180

radius = 100



```
var grad = ctx.createRadialGradient(130,130,100,180,180,20);
```

Linear Gradient (object custom constructor)

index.js

```
var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawLinearGradient = function()
{
    this.theLinearGradient = function
    (    itsVerGradient1,itsHorGradient1,itsVerGradient2,itsHorGradient2,
        itsPosX,itsPosY,itsPosWidth,itsPosHeight,
        itsColorStop1,itsColorStop1Color,itsColorStop2,itsColorStop2Color    )
    {
        grad = ctx.createLinearGradient(itsVerGradient1,itsHorGradient1,itsVerGradient2,itsHorGradient2);
        grad.addColorStop(itsColorStop1,itsColorStop1Color);
        grad.addColorStop(itsColorStop2,itsColorStop2Color);
        ctx.fillStyle=grad;
        ctx.fillRect(itsPosX,itsPosY,itsPosWidth,itsPosHeight);
    }
};
```

index.html

```
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>
```

```
<script src="index.js"></script>
```

```
<script>
var lineargradient = new DrawLinearGradient()
  lineargradient.theLinearGradient(0,0,200,0,50,50,200,100,0,"orange",1,"green")
</script>
```

```
</body>
</html>
```

```
itsVerGradient1, itsHorGradient1,itsVerGradient2,itsHorGradient2,
itsPosX,itsPosY,itsPosWidth,itsPosHeight,
itsColorStop1,itsColorStop1Color,itsColorStop2,itsColorStop2Color
```



Radial Gradient (object custom constructor)

index.js

```

var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawRadialGradient = function()
{
    this.theRadialGradient = function
    (
        itsX1,itsY1,itsR1,itsX2,itsY2,itsR2,
        itsPosX,itsPosY,itsPosWidth,itsPosHeight,
        itsColorStop1,itsColorStop1Color,itsColorStop2,itsColorStop2Color
    )
    {
        grad = ctx.createRadialGradient(itsX1,itsY1,itsR1,itsX2,itsY2,itsR2);
        grad.addColorStop(itsColorStop1,itsColorStop1Color);
        grad.addColorStop(itsColorStop2,itsColorStop2Color);
        ctx.fillStyle=grad;
        ctx.fillRect(itsPosX,itsPosY,itsPosWidth,itsPosHeight);
    }
};

```

index.html

```

<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>

<script>
var radialgradient = new DrawRadialGradient()
  radialgradient.theRadialGradient(130,130,20,180,180,100, 50,50,200,100, 0,"orange",1,"green" )
</script>

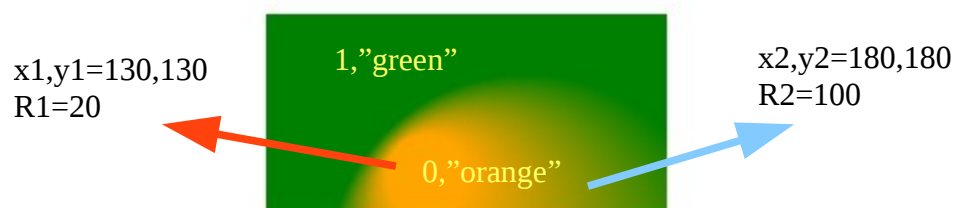
</body>
</html>

```

```

itsX1,itsY1,itsR1,itsX2,itsY2,itsR2,
itsPosX,itsPosY,itsPosWidth,itsPosHeight,
itsColorStop1,itsColorStop1Color,itsColorStop2,itsColorStop2Color

```

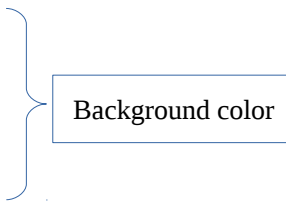


Change canvas background

```
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="TF-8">
  <style>
    canvas
    {
      background :hsl(30, 100%,50%);
    }
  </style>
</head>

<body>
  <canvas id="myCanvas" width="300" height="300" style="border:1px solid #c3c3c3;">
    Your browser does not support the canvas element.
  </canvas>

  <script>
    //javascript here
  </script>
</body>
</html>
```



A diagram consisting of a blue-outlined box containing the text "Background color". To the left of the box is a large curly bracket that spans the vertical range of the CSS rule `background :hsl(30, 100%,50%);` in the code block above.

Draw rectangle (fill and stroke)

```

<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="TF-8">
  <style>
    canvas
    {
      background :radial-gradient(white,pink);
    }
  </style>
</head>

<body>
  <canvas id="myCanvas" width="300" height="300" style="border:1px solid #c3c3c3;">
    Your browser does not support the canvas element.
  </canvas>

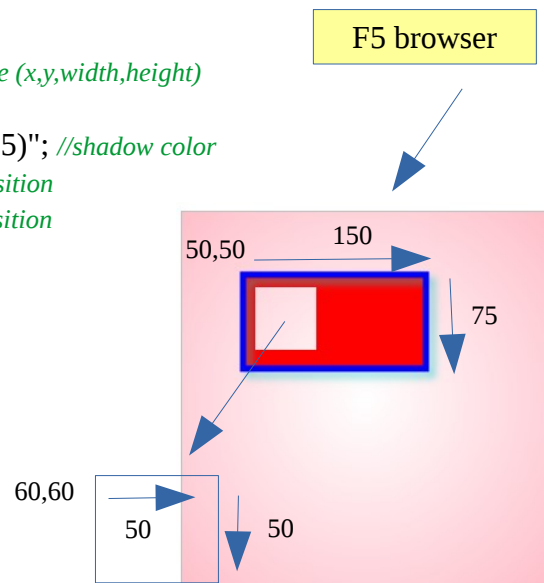
  <script>
    var canvas = document.getElementById("myCanvas");
    var ctx = canvas.getContext("2d");

    ctx.fillStyle = "red"; //fill color
    ctx.fillRect(50,50, 150, 75); //draw rectangle (x,y,width,height)

    ctx.shadowColor = "rgba(20, 204, 204, 0.5)"; //shadow color
    ctx.shadowOffsetX = 5; //move shadow x position
    ctx.shadowOffsetY = 5; //move shadow y position
    ctx.shadowBlur = 5; //blur shadow

    ctx.strokeStyle = "blue"; //stroke color
    ctx.lineWidth = 5; //stroke width
    ctx.strokeRect(50,50,150,75); //draw stroke
    ctx.clearRect(60,60,50,50); //cut rectangle
  </script>
</body>
</html>

```



Draw Rectangle (object custom constructor)

index.js

```

var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawRectangle = function()
{
  this.theRectangle = function ( itsFillStyle,itsX,itsY,itsWidth,itsHeight )
  {
    ctx.fillStyle = itsFillStyle;
    ctx.fillRect(itsX,itsY,itsWidth,itsHeight);
  }
};

```

index.html

```

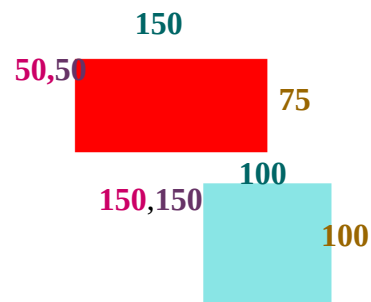
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>
<script>
  var rectangle = new DrawRectangle()
  rectangle.theRectangle("red",50,50,150,75) //draw rectangle (color red, x,y,width,height)
  var rectangleku = new DrawRectangle()
  rectangleku.theRectangle("rgba(20,204,204,0.5)", 150,150,100,100)
</script>

</body>
</html>

```



Draw Rectangle with shadow and blur (object custom constructor)

index.js

```
var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawRectangle = function()
{
    this.theRectangle = function ( itsShadowColor,itsShadowOffsetX,itsShadowOffsetY,
                                   itsShadowBlur,itsStrokeStyle,itsLineWidth,
                                   itsX,itsY,itsWidth,itsHeight )

    {
        ctx.shadowColor = itsShadowColor;
        ctx.shadowOffsetX = itsShadowOffsetX;
        ctx.shadowOffsetY = itsShadowOffsetY;
        ctx.shadowBlur = itsShadowBlur;
        ctx.strokeStyle = itsStrokeStyle;
        ctx.lineWidth = itsLineWidth;
        ctx.strokeRect(itsX,itsY,itsWidth,itsHeight);
    }
};
```

index.html

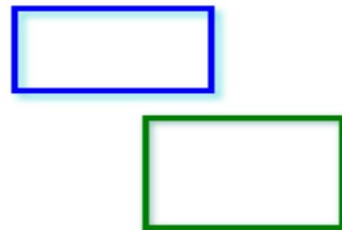
```
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
    <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
    Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>

<script>
var rectangle = new DrawRectangle()
    rectangle.theRectangle("rgba(20, 204, 0.5)",5,5, 5,"blue",5, 50,50,150,75)
var rectangle2 = new DrawRectangle()
    rectangle2.theRectangle("rgba(20, 104, 104, 0.5)",2,2, 5,"green",5, 150,150,150,100)
</script>

</body>
</html>
```



Draw circle

<body>

<canvas id="myCanvas" width="300" height="300" style="border:1px solid #c3c3c3;">

Your browser does not support the canvas element.

</canvas>

<script>

var canvas = document.getElementById("myCanvas");

var ctx = canvas.getContext("2d");

var margin = 30;

var radiusWidth = canvas.width/2 - margin;

function drawCircle()

{

ctx.beginPath(); //start draw

ctx.arc(canvas.width/2, canvas.height/2, radiusWidth, 0, Math.PI*2, true);

ctx.stroke(); //draw line

}

function drawCenter()

{

ctx.beginPath(); //start draw

ctx.arc(canvas.width/2, canvas.height/2, 10, 0, Math.PI*2, true);

ctx.stroke(); //draw line

}

function drawClock()

{

drawCircle();

drawCenter();

}

drawClock();

</script>

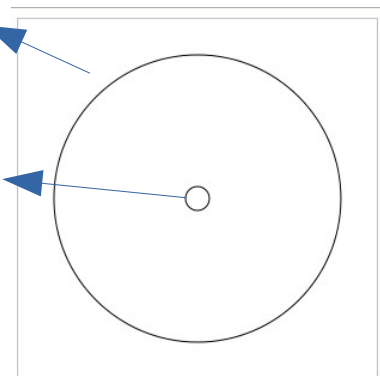
</body>

ctx.arc(x,y,radius,startAngle,endAngle,anticlockwise)

drawCircle

drawCenter

F5 browser



Draw Circle (object custom constructor)

index.js

```
var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawCircle = function()
{
    this.theCircle = function (itsX,itsY,itsR,istStartAngle,itsEndAngle,itsAnticlockwise )
    {
        ctx.beginPath();
        ctx.arc(itsX,itsY,itsR,istStartAngle,itsEndAngle,itsAnticlockwise);
        ctx.stroke();
    }
};
```

index.html

```
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>

<script>
var circle = new DrawCircle()
  circle.theCircle(100,200,15,0,Math.PI*2,true)
</script>

</body>
</html>
```

Draw Circle with shadow and blur (object custom constructor)

index.js

```
var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawCircle = function()
{
    this.theCircle = function
        ( itsStrokeStyle,
          itsShadowColor, itsShadowOffsetX, itsShadowOffsetY, itsShadowBlur,
          itsLineWidth,
          itsX, itsY, itsR,
          istStartAngle, itsEndAngle,
          itsAnticlockwise )
    {
        ctx.beginPath();
        ctx.strokeStyle = itsStrokeStyle;
        ctx.shadowColor = itsShadowColor;
        ctx.shadowOffsetX = itsShadowOffsetX;
        ctx.shadowOffsetY = itsShadowOffsetY;
        ctx.shadowBlur = itsShadowBlur;
        ctx.lineWidth = itsLineWidth;
        ctx.arc(itsX, itsY, itsR, istStartAngle, itsEndAngle, itsAnticlockwise);
        ctx.stroke();
    }
};
```

index.html

```
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>

<script>
var circle = new DrawCircle()
  circle.theCircle("orange", "blue",2,2,5, 5, 100,200,15, 0,Math.PI*2, true)
</script>

</body>
</html>
```



Draw line

<body>

<canvas id="myCanvas" width="800" height="600" style="border:1px solid ">

Your browser does not support the canvas element.

</canvas>

<script>

var **canvas** = document.getElementById("myCanvas");var **ctx** = **canvas**.getContext("2d");function **horLine()**

{

ctx.lineWidth = 5; //line thickness

ctx.beginPath(); //start draw

ctx.strokeStyle = "blue"; //line color

ctx.moveTo(0, canvas.height/2); //x,y

ctx.lineTo(canvas.width, canvas.height/2); //x,y

ctx.stroke(); //draw line

}

function **verLine()**

{

ctx.lineWidth = 5; //line thickness

ctx.beginPath(); //start draw

ctx.strokeStyle = "red"; //line color

ctx.moveTo(canvas.width/2,0); //x,y

ctx.lineTo(canvas.width/2, canvas.height); //x,y

ctx.stroke(); //draw line

}

function **draw()**

{

horLine(); //call function horLine

verLine(); //call function verLine

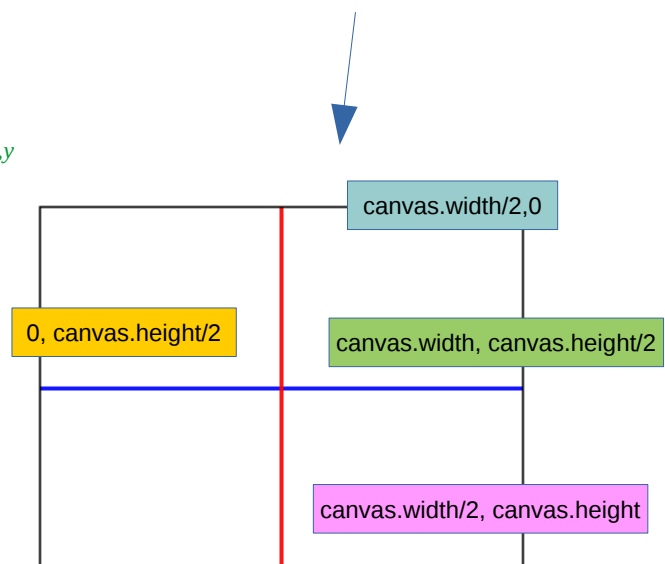
}

draw(); //call function draw

</script>

</body>

F5 browser



Draw Line (object custom constructor)

index.js

```

var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawLine = function()
{
    this.theLine = function (itsLineWidth,itsStrokeStyle,itsX1,itsY1,itsX2,itsY2 )
    {
        ctx.lineWidth = itsLineWidth;
        ctx.beginPath();
        ctx.strokeStyle = itsStrokeStyle;
        ctx.moveTo(itsX1,itsY1);
        ctx.lineTo(itsX2,itsY2);
        ctx.stroke();
    }
};

```

index.html

```

<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

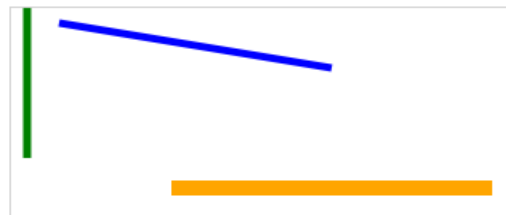
<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>

<script>
var line1 = new DrawLine()
  line1.theLine(5,"blue",30,10,200,40)
  line2 = new DrawLine()
  line2.theLine(5,"green",10,0,10,100)
  line3 = new DrawLine()
  line3.theLine(10,"orange",100,120,300,120)
</script>

</body>
</html>

```



Grid from line

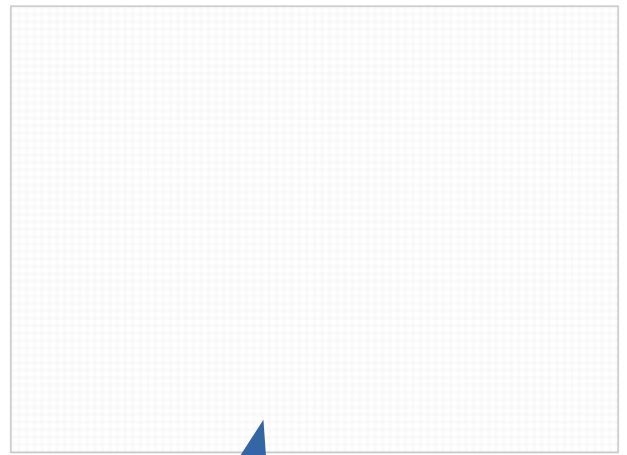
example.js

```
var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");
```

```
function horLine()
{
    x1 = 0; y1 = 0;    x2 = 0; y2 = 600;
    for(var a=0; a<=80; a++) //width 800/10 = 80
    {
        ctx.lineWidth = 0.1;
        ctx.beginPath();
        ctx.strokeStyle = "grey";
        ctx.moveTo(x1,y1);
        ctx.lineTo(x2,y2);
        ctx.stroke();
        x1 = x1+10;
        x2 = x2+10;
    }
}
```

```
function verLine()
{
    x1 = 0; y1 = 0;    x2 = 800; y2 = 0;
    for(var a=0; a<=60; a++) //width 600/10=60
    {
        ctx.lineWidth = 0.1;
        ctx.beginPath();
        ctx.strokeStyle = "grey";
        ctx.moveTo(x1,y1);
        ctx.lineTo(x2,y2);
        ctx.stroke();
        y1 = y1+10;
        y2 = y2+10;
    }
}
```

```
function draw()
{
    horLine();
    verLine();
}
```



F5 browser

main.html

```
<body>
  <canvas id="myCanvas" width="800" height="600" style="border:1px solid #c3c3c3;">
    Your browser does not support the canvas element.
  </canvas>

  <script src = 'example.js'></script>
  <script>
    draw();
  </script>
</body>
```

Grid Line (object custom constructor)

index.js

```

var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

var DrawLine = function()
{
  this.theLine = function ( itsLineWidth,itsStrokeStyle,itsX1,itsY1,itsX2,itsY2 )
  {
    ctx.lineWidth = itsLineWidth;
    ctx.beginPath();
    ctx.strokeStyle = itsStrokeStyle;
    ctx.moveTo(itsX1,itsY1);
    ctx.lineTo(itsX2,itsY2);
    ctx.stroke();
  }
};

```

index.html

```

<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

```

```
<script src="index.js"></script>
```

```

<script>
var line1 = new DrawLine() // first object
  x1=0; y1=0; x2=0; y2=600;
  for(var a=0; a<=80; a++)
  {
    line1.theLine(2,"blue",x1,y1,x2,y2);
    x1=x1+10;
    x2=x2+10;
  }

  line2 = new DrawLine() // second object
  x1=0; y1=0; x2=800; y2=0;
  for(var a=0; a<=60; a++)
  {
    line2.theLine(2,"red",x1,y1,x2,y2);
    y1=y1+10;
    y2=y2+10;
  }
</script>

```



```

</body>
</html>

```

Grid Line (object custom constructor 2)

index.js

```
var canvas = document.getElementById("myCanvas");  
var ctx = canvas.getContext("2d");
```

1

08 Agustus 2016

```
var DrawLine = function()  
{  
  this.theLine = function (itsLineWidth,itsStrokeStyle,itsX1,itsY1,itsX2,itsY2)  
  {  
    ctx.lineWidth = itsLineWidth;  
    ctx.beginPath();  
    ctx.strokeStyle = itsStrokeStyle;  
    ctx.moveTo(itsX1,itsY1);  
    ctx.lineTo(itsX2,itsY2);  
    ctx.stroke();  
  };  
  
  this.drawVerLine = function (itsLineWidth,itsStrokeStyle,itsX1,itsY1,itsX2,itsH,itsW)  
  {  
    var lineWidth = itsLineWidth;  
    var strokeStyle = itsStrokeStyle;  
    var x1 = itsX1;  
    var y1 = itsY1;  
    var x2 = itsX2;  
    var y2 = itsH;  
    var W = itsW;  
  
    var width=W/10;  
    for(var a=0; a<=width; a++)  
    {  
      this.theLine(lineWidth,strokeStyle,x1,y1,x2,y2);  
      x1=x1+10;  
      x2=x2+10;  
    }  
  };  
  
  this.drawHorLine = function (itsLineWidth,itsStrokeStyle,itsX1,itsY1,itsW,itsY2,itsH)  
  {  
    var lineWidth = itsLineWidth;  
    var strokeStyle = itsStrokeStyle;  
    var x1 = itsX1;  
    var y1 = itsY1;  
    var x2 = itsW;  
    var y2 = itsY2;  
    var H = itsH;  
  
    var height=H/10;  
    for(var a=0; a<=height; a++)  
    {  
      this.theLine(lineWidth,strokeStyle,x1,y1,x2,y2);  
      y1=y1+10;  
      y2=y2+10;  
    }  
  };  
};
```

index.html

2

```
<!DOCTYPE html>
<html lang="en">
<head><title>HOME</title>
  <meta charset="UTF-8">
</head>

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>
<script>
var line1 = new DrawLine(); // first object
  //linewidth, linecolor, x1, y1, x2, canvas.height, canvas.width
  line1.drawVerLine(2,"blue",0,0,0,600,800);
  //linewidth, linecolor, x1, y1, canvas.width, y2, canvas.height
  line1.drawHorLine(2,"red",0,0,800,0,600);
</script>

</body>
</html>
```

Create and connect between line

<body>

<canvas id="myCanvas" width="800" height="600" style="border:1px solid ">

Your browser does not support the canvas element.

</canvas>

<script src= "example.js"></script> //external javascript

<script>

function line1()

{

ctx.lineWidth = 1; //width

ctx.strokeStyle = "blue"; //color

ctx.beginPath(); //start draw

ctx.moveTo(0, canvas.height/2); //first dot x,y

ctx.lineTo(700, 50); //second dot x,y

ctx.lineTo(700, 500); //third dot x,y

ctx.lineTo(0,canvas.height/2); //back to first dot x,y

See : make grid from lines

Or we can use
ctx.closePath();

ctx.stroke(); //draw lines

}

draw();

line1();

Call function in external javascript (example.js)

Call function in this file

</script>

</body>

F5 browser

0, canvas.height/2

700,50

700,500

triangle (object custom constructor with method outside object)

index.js

```

var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");

this.theStrokeStyle = function (itsStrokeStyle)
{
  ctx.strokeStyle = itsStrokeStyle;
}

this.theShadowColorOffset = function(itsShadowColor, itsShadowOffsetX, itsShadowOffsetY)
{
  ctx.shadowColor = itsShadowColor;
  ctx.shadowOffsetX = itsShadowOffsetX;
  ctx.shadowOffsetY = itsShadowOffsetY;
}

this.theShadowBlur = function(itsShadowBlur)
{
  ctx.shadowBlur = itsShadowBlur;
}

this.theLineWidth = function(itsLineWidth)
{
  ctx.lineWidth = itsLineWidth;
}

var DrawTriangle = function()
{
  this.theTriangle = function ( itsX1,itsY1,itsX2,itsY2,itsX3,itsY3 )
  {
    ctx.beginPath();
    ctx.moveTo(itsX1,itsY1);
    ctx.lineTo(itsX2,itsY2);
    ctx.lineTo(itsX3,itsY3);
    ctx.lineTo(itsX1,itsY1)
    ctx.stroke();
  }

  this.gettheStrokeStyle = theStrokeStyle;
  this.gettheShadowColorOffset = theShadowColorOffset;
  this.gettheShadowBlur = theShadowBlur;
  this.gettheLineWidth = theLineWidth;
};

```

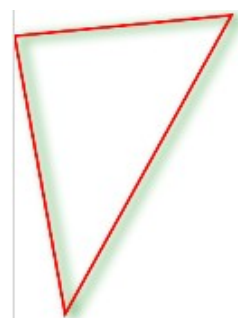
index.html

```

<body>
<canvas id="myCanvas" width="800" height="600" style="border:1px solid #d3d3d3;">
  Your browser does not support the canvas element.
</canvas>

<script src="index.js"></script>
<script>
var triangle = new DrawTriangle()
triangle.gettheStrokeStyle("red")
triangle.gettheShadowColorOffset("green",10,4)
triangle.gettheShadowBlur(15)
triangle.gettheLineWidth(4)
triangle.theTriangle(0,100,300,70,70,500)
</script>
</body>

```



Combination between line and text

```

<body>
  <canvas id="myCanvas" width="800" height="600" style="border:1px solid ">
    Your browser does not support the canvas element.
  </canvas>

  <script src="example.js"></script> //external javascript
  <script>
    function line1()
    {
      ctx.font = "30px _sans"; //set font size and family
      ctx.textBaseline = "top"; //text bottom x,y position
      ctx.fillText("Drawing in Canvas HTML", 10,10); //draw text position x=0 y=0
      ctx.fillText("using JAVASCRIPT", 10,60); //draw text position x=10 y=60

      ctx.lineWidth = 1; //all line width
      ctx.strokeStyle = "blue"; //all line color blue
      ctx.fillStyle = "green"; //all font color after this green
      ctx.font = "12px _sans"; //set font size and family
      ctx.textBaseline = 'top'; //text bottom x,y position

      ctx.beginPath(); //start draw
      ctx.moveTo(0, canvas.height/2); //x,y
      ctx.fillText("x = 0, y = 300", 10,280); //draw text position x=10 y=280
      ctx.lineTo(700, 50); //x,y
      ctx.fillText("x = 700, y = 50", 680,30); //draw text position x=680 y=30
      ctx.lineTo(700, 500); //x,y
      ctx.fillText("x = 700, y = 500", 680,520); //draw text position x=680 y=520
      ctx.closePath(); //back to first dot

      ctx.stroke(); //draw lines
    }
    draw();
    line1();
  </script>
</body>

```

F5 browser

