

iPhone Game Design

one bad example, coreGraphics

game mechanics:

- turn XY
- fill XY
- setupLevel level
- solved?

iPhone mechanics:

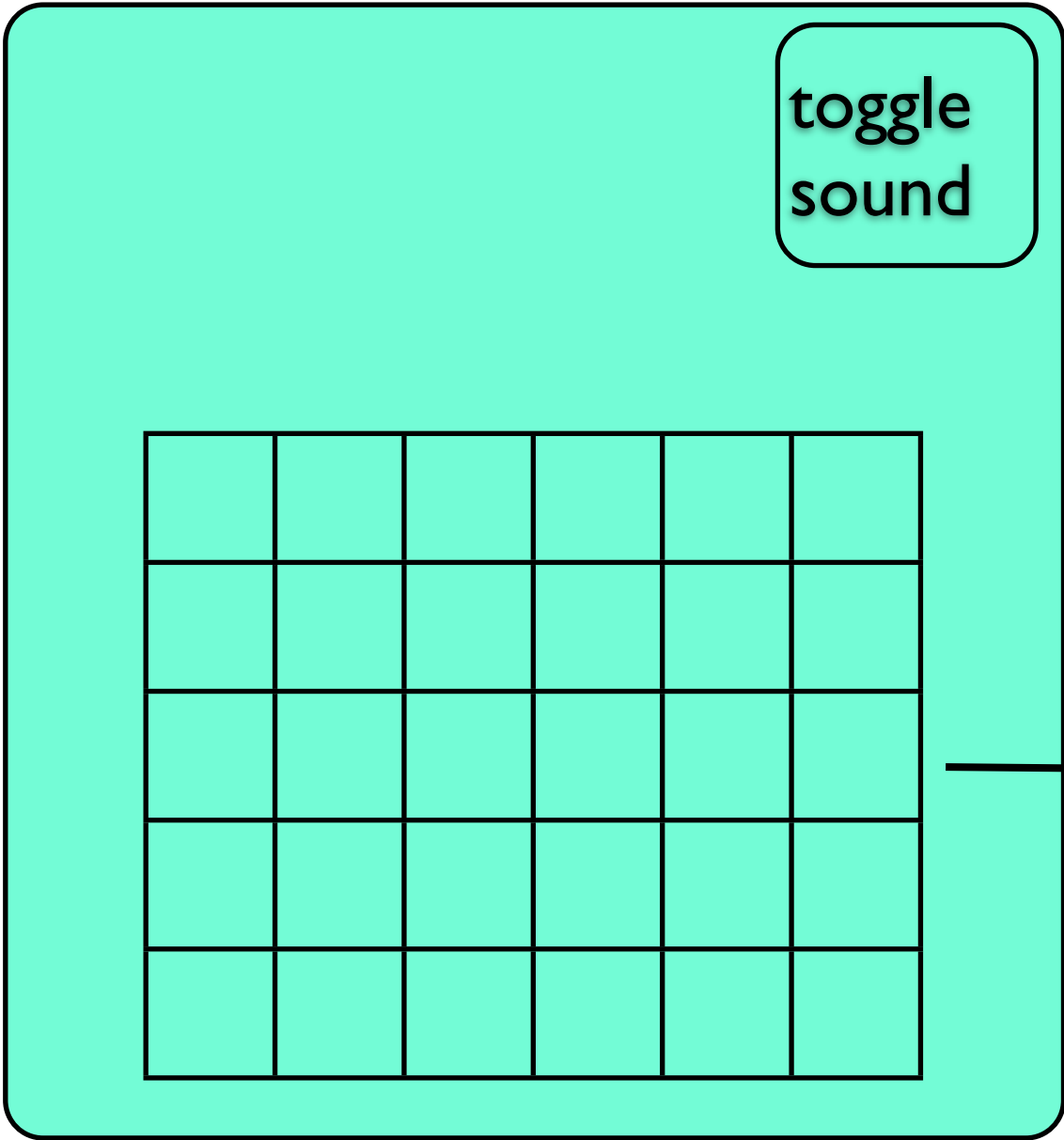
- constructor
- drawRect
- touches

menu

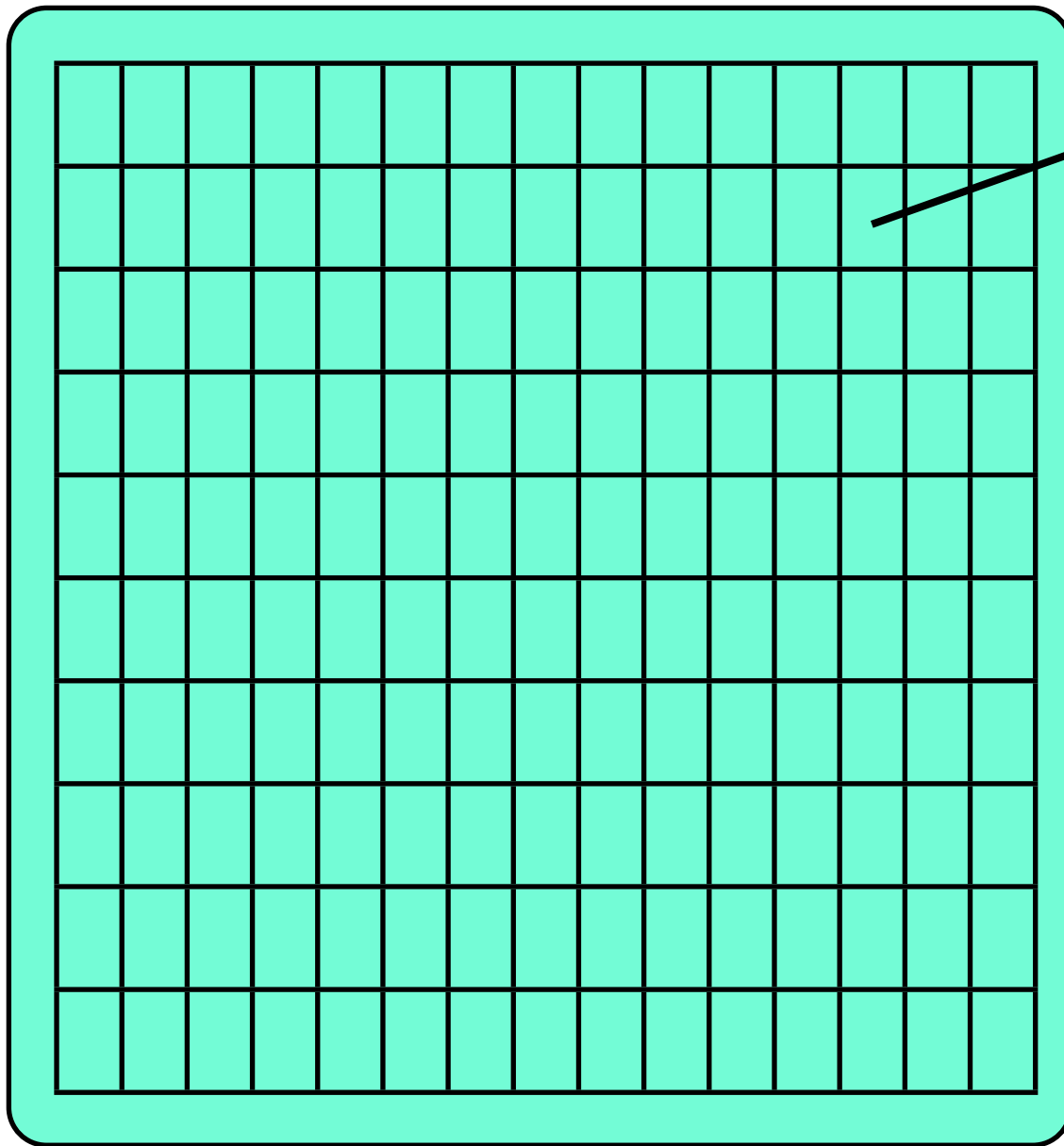
game

solved

menu



game



```
onTouch:  
find x,y  
turn(x,y)  
if  
  solved  
else  
  [self  
  setNeedsDisplay]
```

```
drawRect:  
for x  
  for y  
    draw tile
```

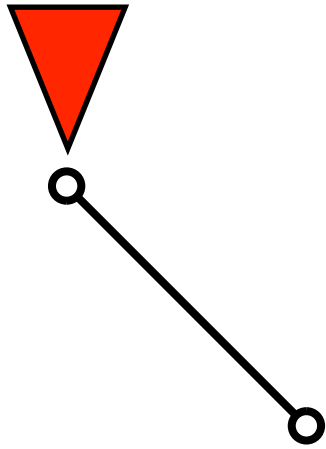
CGContext

- CGContextRef defines the drawing context
- `CGContextRef myContext= UIGraphicsGetCurrentContext();`
- allows basic drawing functionality like:
circles, lines, rectangles, path, bezier paths,
images, pdfs

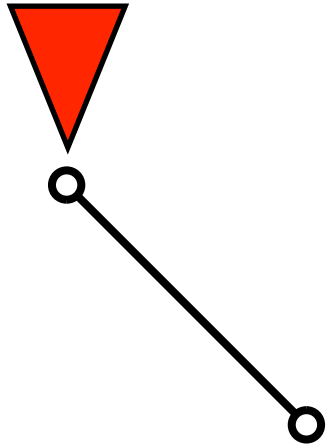
line

```
CGContextBeginPath(myContext);
CGContextMoveToPoint(myContext,
    (float)(rand()%(int)self.bounds.size.width),
    (float)(rand()%(int)self.bounds.size.height));
CGContextAddLineToPoint(myContext,
    (float)(rand()%(int)self.bounds.size.width),
    (float)(rand()%(int)self.bounds.size.height));
CGContextStrokePath(myContext);
```

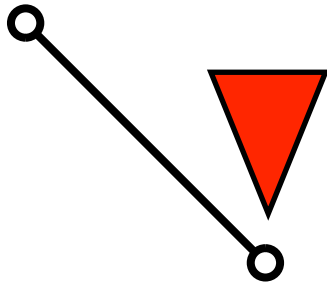
path



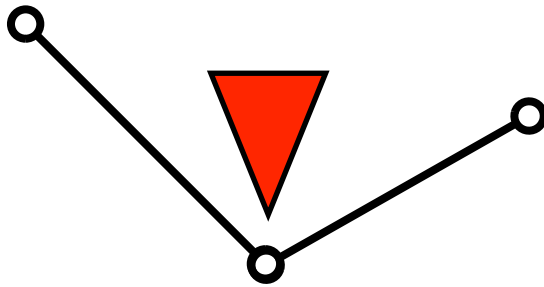
`CGContextBeginPath(myContext);` **path**



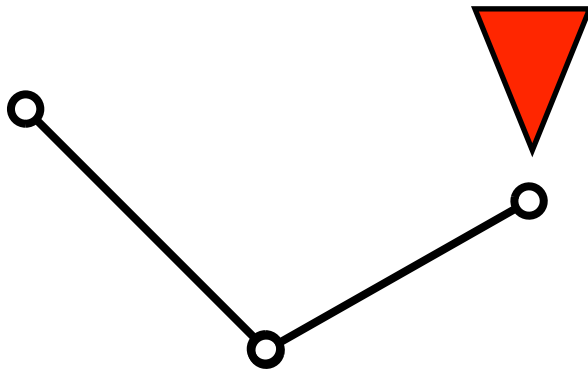
`CGContextBeginPath(myContext);` **path**



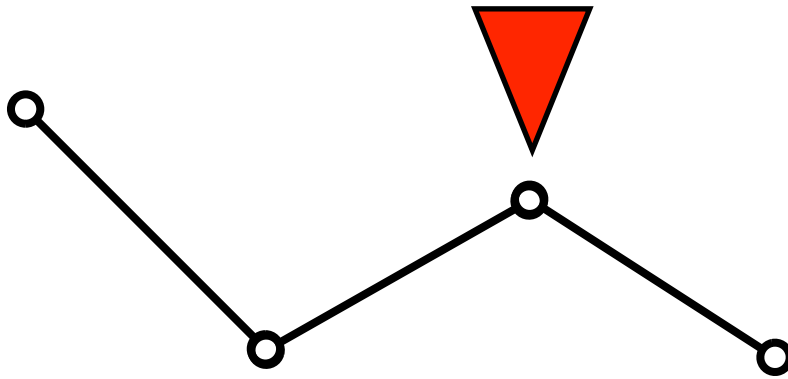
`CGContextBeginPath(myContext);` **path**



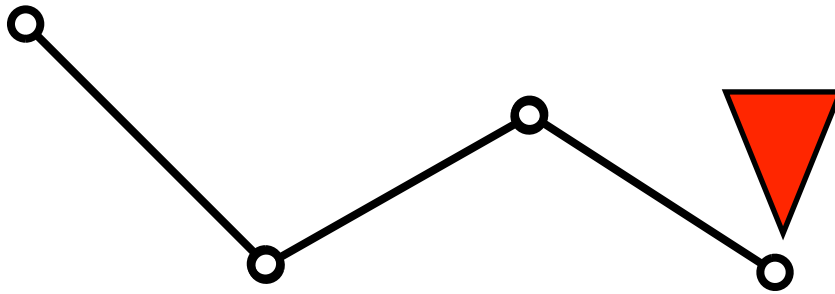
`CGContextBeginPath(myContext);` **path**



`CGContextBeginPath(myContext);` **path**

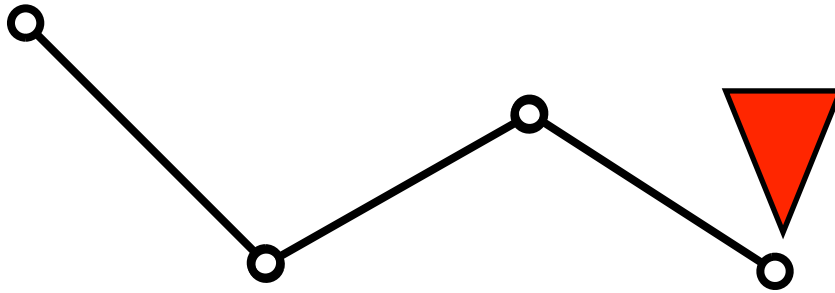


`CGContextBeginPath(myContext);` **path**



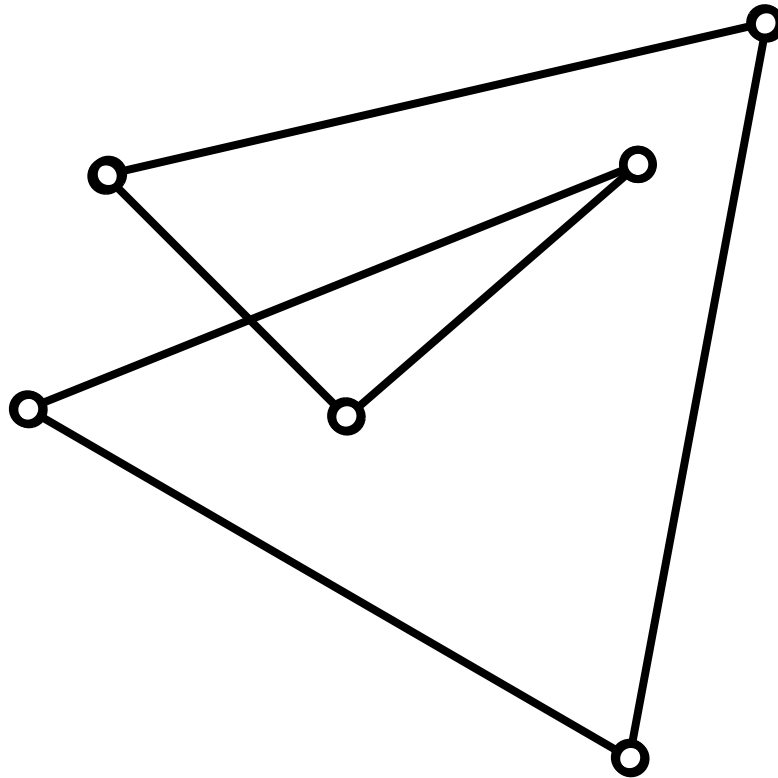
path

```
CGContextBeginPath(myContext);
```



```
CGContextStrokePath(myContext);
```

CGContextFillPath



Getting and Setting Graphics State Parameters

CGContextGetInterpolationQuality
CGContextSetFlatness
CGContextSetInterpolationQuality
CGContextSetLineCap
CGContextSetLineDash
CGContextSetLineJoin
CGContextSetLineWidth
CGContextSetMiterLimit
CGContextSetPatternPhase
CGContextSetFillPattern
CGContextSetRenderingIntent
CGContextSetShouldAntialias
CGContextSetStrokePattern
CGContextSetBlendMode
CGContextSetAllowsAntialiasing
CGContextSetAllowsFontSmoothing
CGContextSetShouldSmoothFonts
CGContextSetAllowsFontSubpixelPositioning
CGContextSetShouldSubpixelPositionFonts
CGContextSetAllowsFontSubpixelQuantization
CGContextSetShouldSubpixelQuantizeFonts

Constructing Paths

CGContextAddArc
CGContextAddArcToPoint
CGContextAddCurveToPoint
CGContextAddLines
CGContextAddLineToPoint
CGContextAddPath
CGContextCopyPath
CGContextAddQuadCurveToPoint
CGContextAddRect
CGContextAddRects
CGContextBeginPath
CGContextClosePath
CGContextMoveToPoint
CGContextAddEllipseInRect

Painting Paths

CGContextClearRect
CGContextDrawPath
CGContextEOFillPath
CGContextFillPath
CGContextFillRect
CGContextFillRects
CGContextFillEllipseInRect
CGContextStrokePath
CGContextStrokeRect
CGContextStrokeRectWithWidth
CGContextReplacePathWithStrokedPath
CGContextStrokeEllipseInRect
CGContextStrokeLineSegments

Setting Color, Color Space, and Shadow Values

CGContextSetAlpha
CGContextSetCMYKFillColor
CGContextSetFillColor
CGContextSetCMYKStrokeColor
CGContextSetFillColorSpace
CGContextSetFillColorWithColor
CGContextSetGrayFillColor
CGContextSetGrayStrokeColor
CGContextSetRGBFillColor
CGContextSetRGBStrokeColor
CGContextSetShadow
CGContextSetShadowWithColor
CGContextSetStrokeColor
CGContextSetStrokeColorSpace
CGContextSetStrokeColorWithColor

example

- make the starfield app