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Tile Recipes

The Tile classes are in the [geoscript.layer](#) package.

Tile

Tile Properties

Get a Tile's Properties.

```
byte[] data = new File("src/main/resources/tile.png").bytes
Tile tile = new Tile(2,1,3,data)
println "Z = ${tile.z}"
println "X = ${tile.x}"
println "Y = ${tile.y}"
println "Tile = ${tile.toString()}"
println "# bytes = ${tile.data.length}"
println "Data as base64 encoded string = ${tile.base64String}"
```

```
Z = 2
X = 1
Y = 3
Tile = Tile(x:1, y:3, z:2)
# bytes = 11738
Data as base64 encoded string = iVBORw0KGgoAAAANSUhEUgAAQAAAAEACAYAAABccqhmAAAtOU...
```

ImageTile Properties

Some Tiles contain an Image. ImageTile's have an image property.

```
byte[] data = new File("src/main/resources/tile.png").bytes
ImageTile tile = new ImageTile(0,0,0,data)
BufferedImage image = tile.image
```



Pyramid

Pyramid Properties

Get the Pyramid's Bounds.

```
Pyramid pyramid = Pyramid.createGlobalMercatorPyramid()  
  
Bounds bounds = pyramid.bounds  
println bounds
```

```
(-2.0036395147881314E7,-  
2.0037471205137067E7,2.0036395147881314E7,2.0037471205137067E7,EPsg:3857)
```

Get the Pyramid's projection.

```
Projection proj = pyramid.proj  
println proj
```

```
EPsg:3857
```

Get the Pyramid's Origin.

```
Pyramid.Origin origin = pyramid.origin  
println origin
```

```
BOTTOM_LEFT
```

Get the Pyramid's Tile Width and Height.

```
int tileWidth = pyramid.tileWidth
int tileHeight = pyramid.tileHeight
println "${tileWidth} x ${tileHeight}"
```

256 x 256

Create Pyramids

Create a Global Mercator Pyramid.

```
Pyramid pyramid = Pyramid.createGlobalMercatorPyramid()
println "Projection: ${pyramid.proj}"
println "Origin: ${pyramid.origin}"
println "Bounds: ${pyramid.bounds}"
println "Max Zoom: ${pyramid.maxGrid.z}"
```

```
Projection: EPSG:3857
Origin: BOTTOM_LEFT
Bounds: (-2.0036395147881314E7,-
2.0037471205137067E7,2.0036395147881314E7,2.003747120513706E7,EP
Max Zoom: 19
```

Create a Global Geodetic Pyramid.

```
Pyramid pyramid = Pyramid.createGlobalGeodeticPyramid()
println "Projection: ${pyramid.proj}"
println "Origin: ${pyramid.origin}"
println "Bounds: ${pyramid.bounds}"
println "Max Zoom: ${pyramid.maxGrid.z}"
```

```
Projection: EPSG:4326
Origin: BOTTOM_LEFT
Bounds: (-179.99,-89.99,179.99,89.99,EP
Max Zoom: 19
```

Tile Layer

Tile Layer Properties

Create a TileLayer from an MBTiles File.

```
File file = new File("src/main/resources/tiles.mbtiles")
MBTiles mbtiles = new MBTiles(file)
```

Get the TileLayer's name.

```
String name = mbtiles.name
println name
```

```
countries
```

Get the TileLayer's Bounds.

```
Bounds bounds = mbtiles.bounds
println bounds
```

```
(-2.0036395147881314E7,-
2.0037471205137067E7,2.0036395147881314E7,2.0037471205137067E7,EPsg:3857)
```

Get the TileLayer's Projection.

```
Projection proj = mbtiles.proj
println proj
```

```
EPsg:3857
```

Get the TileLayer's Pyramid.

```
Pyramid pyramid = mbtiles.pyramid
println pyramid
```

```
geoscript.layer.Pyramid(proj:EPsg:3857, bounds:(-2.0036395147881314E7,-
2.0037471205137067E7,2.0036395147881314E7,2.0037471205137067E7,EPsg:3857),
origin:BOTTOM_LEFT, tileWidth:256, tileHeight:256)
```

Get a Tile from a TileLayer.

```
Tile tile = mbtiles.get(0, 0, 0)
println tile
```

Tile(x:0, y:0, z:0)

