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# Style Recipes

## Creating Strokes

*Create a Stroke Symbolizer with a Color*

```
Stroke stroke = new Stroke("#1E90FF")
```



*Create a Stroke Symbolizer with a Color and Width*

```
Stroke stroke = new Stroke("#1E90FF", 0.5)
```



### Create a Stroke Symbolizer with casing

```
Symbolizer stroke = new Stroke(color: "#333333", width: 5, cap: "round").zindex(0) +  
    new Stroke(color: "#6699FF", width: 3, cap: "round").zindex(1)
```



### Create a Stroke Symbolizer with Dashes

```
Stroke stroke = new Stroke("#1E90FF", 0.75, [5,5], "round", "bevel")
```



### Create a Stroke Symbolizer with railroad Hatching

```
Symbolizer stroke = new Stroke("#1E90FF", 1) + new Hatch("vertline", new Stroke  
    ("#1E90FF", 0.5), 6).zindex(1)
```



*Create a Stroke Symbolizer with spaced Shape symbols*

```
Symbolizer stroke = new Stroke(width: 0, dash: [4, 4]).shape(new Shape("#1E90FF", 6, "circle").stroke("navy", 0.75))
```



*Create a Stroke Symbolizer with alternating spaced Shape symbols*

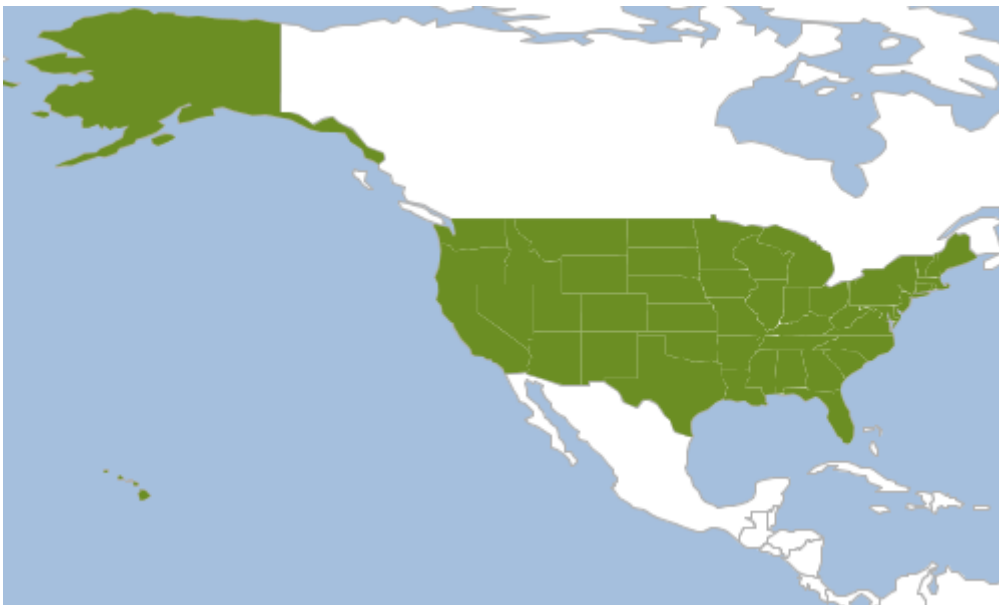
```
Symbolizer stroke = new Stroke("#0000FF", 1, [10,10]).zindex(0) + new Stroke(null, 0, [[5,15],7.5])  
    .shape(new Shape(null, 5, "circle").stroke("#000033",1)).zindex(1)
```



## Creating Fills

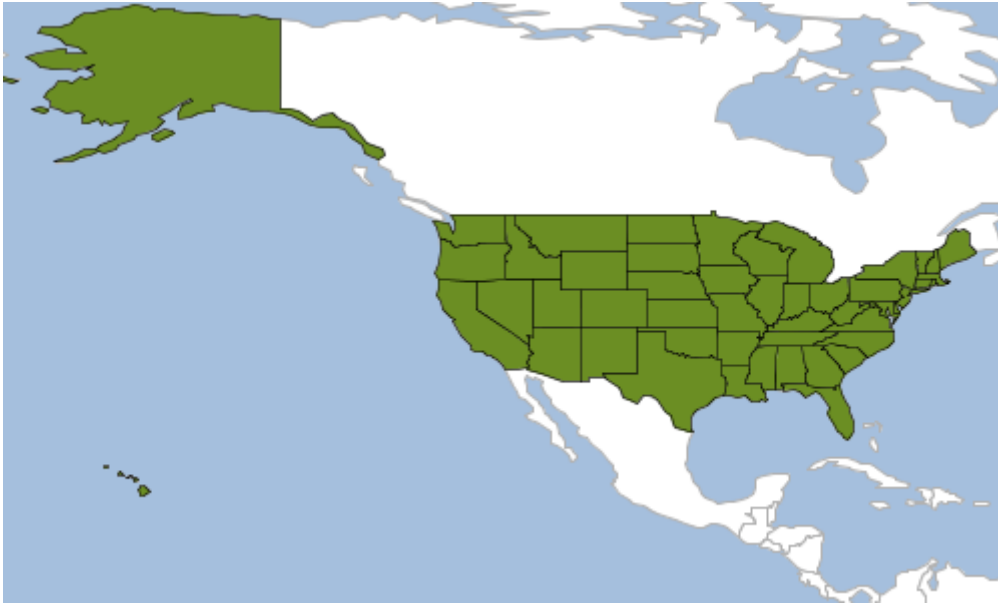
*Create a Fill Symbolizer with a Color*

```
Fill fill = new Fill("#6B8E23")
```



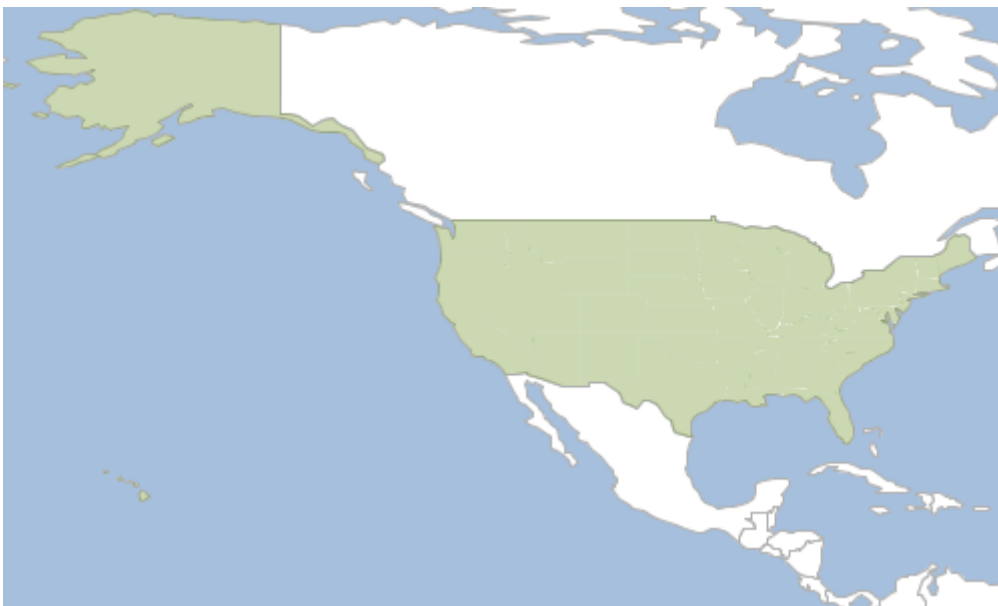
*Create a Fill Symbolizer with a Color and a Stroke*

```
Symbolizer symbolizer = new Fill("#6B8E23") + new Stroke("black", 0.1)
```



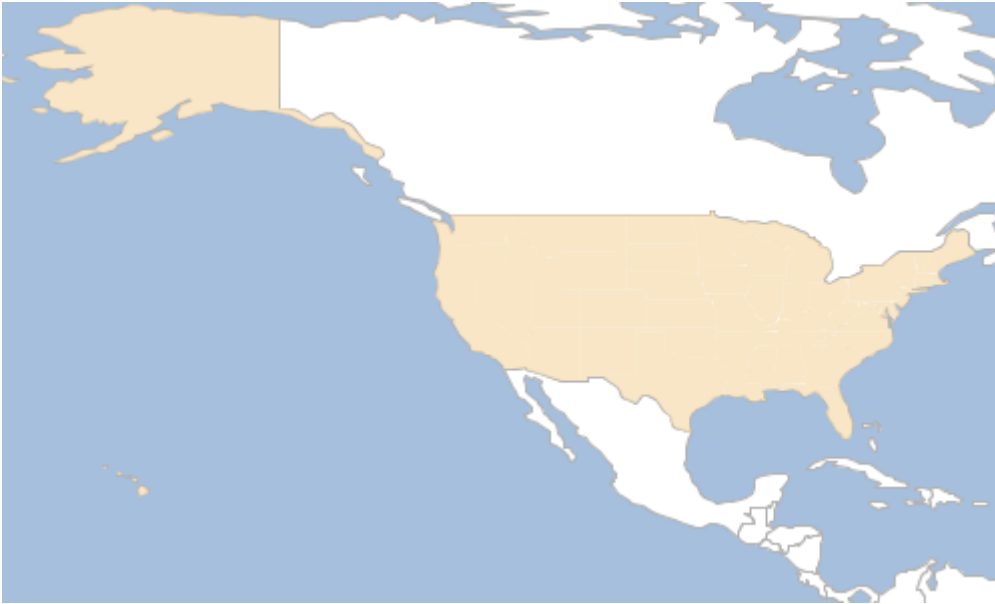
*Create a Fill Symbolizer with a Color and Opacity*

```
Fill fill = new Fill("#6B8E23", 0.35)
```



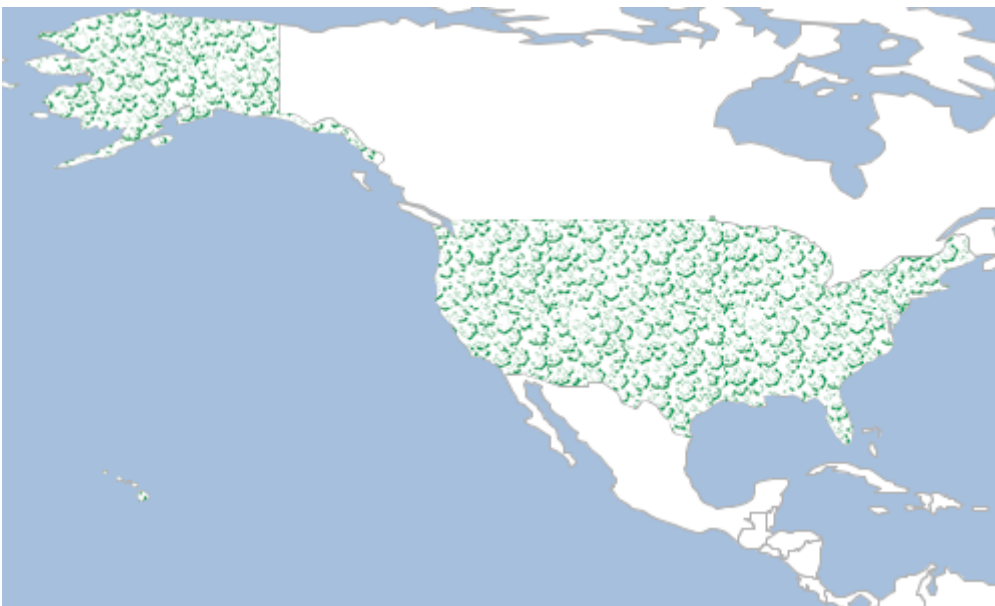
*Create a Fill Symbolizer from named parameters*

```
Fill fill = new Fill(color: "wheat", opacity: 0.75)
```



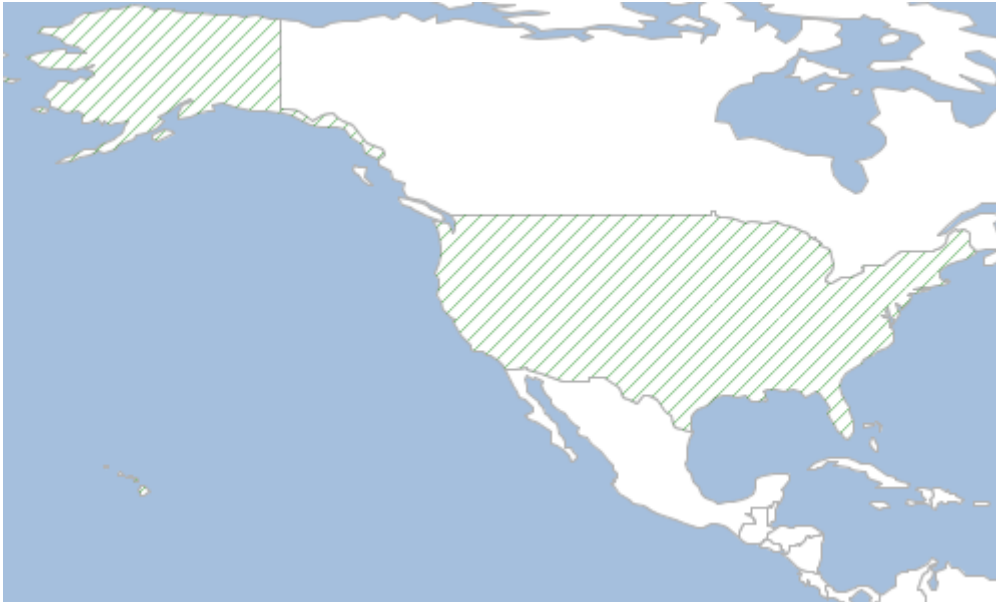
*Create a Fill Symbolizer with an Icon*

```
Fill fill = new Fill("green").icon('src/main/resources/trees.png', 'image/png')
```



*Create a Fill Symbolizer with a Hatch*

```
Fill fill = new Fill("green").hatch("slash", new Stroke("green", 0.25), 8)
```



*Create a Fill Symbolizer with a random fill*

```
Symbolizer symbolizer = new Fill("white").hatch("circle", new Fill("black"), 2).
random(
    random: "free",
    seed: 0,
    symbolCount: 50,
    tileSize: 50,
    rotation: "none"
) + new Stroke("black", 0.25)
```

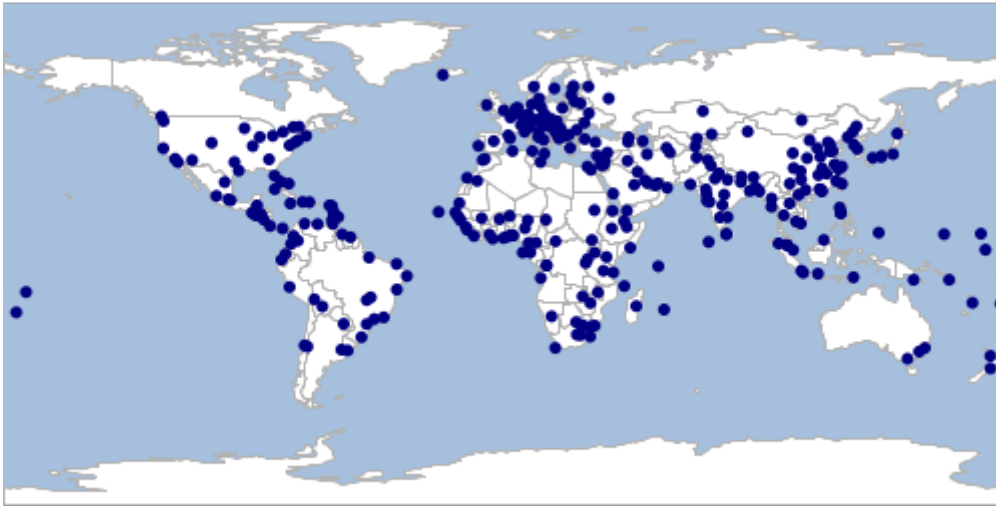


## Creating Shapes

*Create a Shape Symbolizer with a Color*

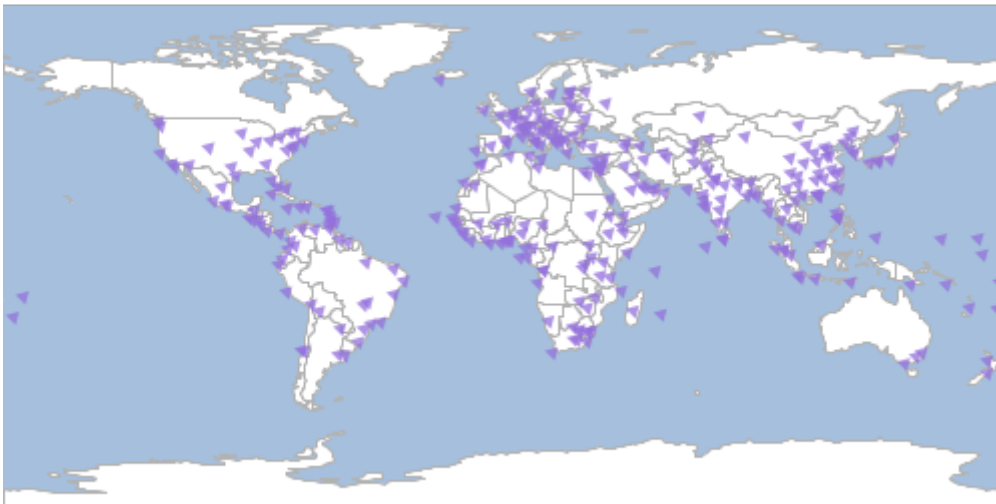
```
Shape shape = new Shape("navy")
```





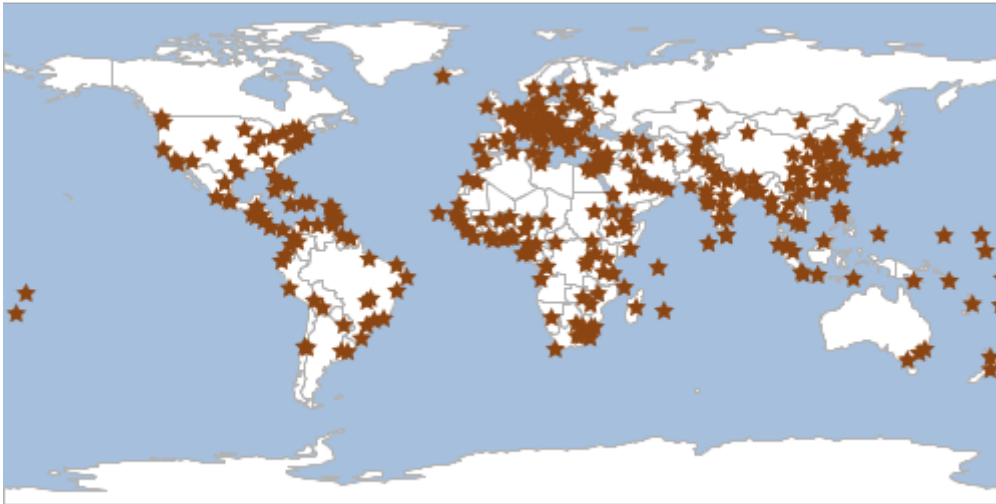
*Create a Shape Symbolizer with a color, size, type, opacity and angle*

```
Shape shape = new Shape("#9370DB", 8, "triangle", 0.75, 45)
```



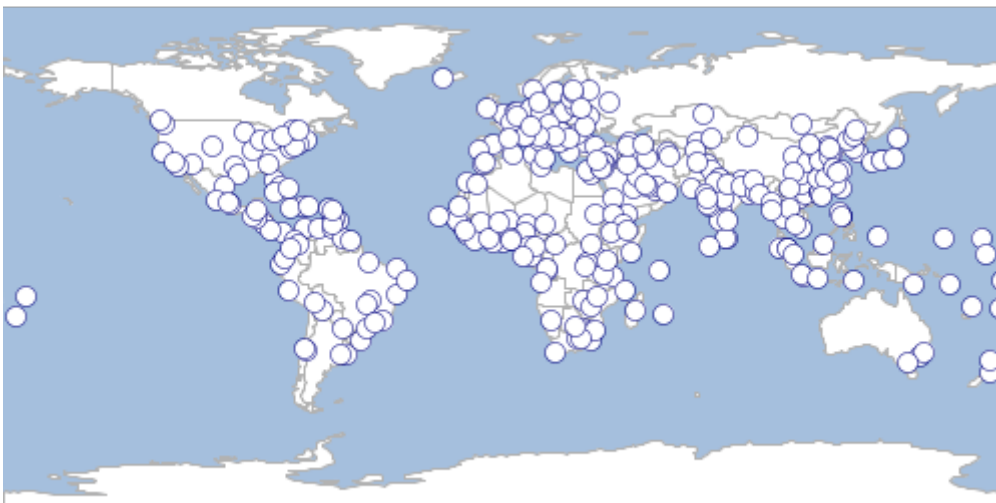
*Create a Shape Symbolizer with named parameters*

```
Shape shape = new Shape(color: "#8B4513", size: 10, type: "star", opacity: 1.0,  
rotation: 0)
```



*Create a Shape Symbolizer with Stroke outline*

```
Symbolizer symbolizer = new Shape("white", 10).stroke("navy", 0.5)
```



## Creating Gradients

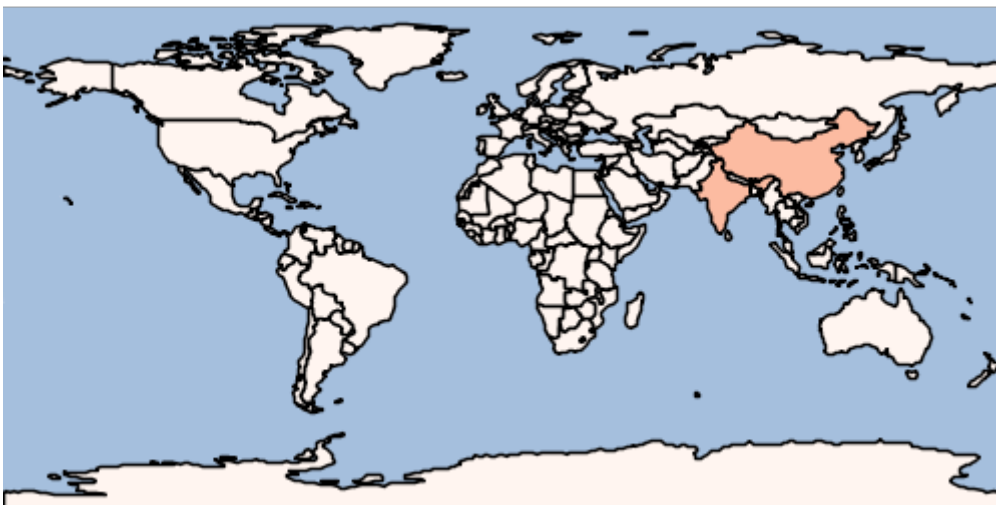
*Create a Gradient Symbolizer from a Layer's Field using quantile method*

```
Workspace workspace = new GeoPackage('src/main/resources/data.gpkg')
Layer countries = workspace.get("countries")
Gradient gradient = new Gradient(countries, "PEOPLE", "quantile", 8, "Greens")
countries.style = gradient
```



*Create a Gradient Symbolizer from a Layer's Field using equal interval method*

```
Workspace workspace = new GeoPackage('src/main/resources/data.gpkg')
Layer countries = workspace.get("countries")
Gradient gradient = new Gradient(countries, "PEOPLE", "equalinterval", 3, "Reds")
countries.style = gradient
```



Create a custom Gradient Symbolizer between Symbolizers and values

```
Gradient gradient = new Gradient(  
    new Property("POP2020"),  
    [0, 10000, 20000, 30000],  
    [  
        new Shape("white", 4).stroke("black", 0.5),  
        new Shape("#b0d2e8", 8).stroke("black", 0.5),  
        new Shape("#3e8ec4", 16).stroke("black", 0.5),  
        new Shape("#08306b", 24).stroke("black", 0.5)  
    ],  
    5,  
    "linear"  
)
```

