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# Layer Recipes

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

A Layer is a collection of Features.

## Getting a Layer's Properties

*Get a Layer from a Workspace and it's name*

```
Workspace workspace = new GeoPackage("src/main/resources/data.gpkg")
Layer layer = workspace.get("countries")
String name = layer.name
println "Name: ${name}"
```

Name: countries

*The Layer's Format*

```
String format = layer.format
println "Format: ${format}"
```

Format: GeoPackage

*Count the number of Features*

```
int count = layer.count
println "# of Features: ${count}"
```

# of Features: 177

*Get the Layer's Projection*

```
Projection proj = layer.proj
println "Projection: ${proj}"
```

Projection: EPSG:4326

### *Get the Bounds of the Layer*

```
Bounds bounds = layer.bounds  
println "Bounds: ${bounds}"
```

```
Bounds: (-179.99999999999997, -  
90.000000000000003, 180.00000000000014, 83.64513000000002, EPSG:4326)
```

## Getting a Layer's Features

### *Iterate over a Layer's Features*

```
Workspace workspace = new GeoPackage("src/main/resources/data.gpkg")  
Layer layer = workspace.get("states")  
layer.eachFeature { Feature feature ->  
    println feature["NAME_1"]  
}
```

```
Minnesota  
Montana  
North Dakota  
Hawaii  
Idaho  
Washington  
Arizona  
California  
Colorado  
Nevada  
...
```

### *Iterate over a subset of a Layer's Features*

```
Workspace workspace = new GeoPackage("src/main/resources/data.gpkg")  
Layer layer = workspace.get("states")  
layer.eachFeature("NAME_1 LIKE 'M%'") { Feature feature ->  
    println feature["NAME_1"]  
}
```

Minnesota  
Montana  
Missouri  
Massachusetts  
Mississippi  
Maryland  
Maine  
Michigan