Interactive Reproducible Maps

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In this project, I develop a web page (HTML) using R Markdown that features a map created with Leaflet.
The following chunk of R code clears environment variables and loads the `leaflet` and `rgdal` libraries.

```
rm(list = ls()) # clear all environment variables
suppressPackageStartupMessages(library(leaflet))
suppressPackageStartupMessages(library(rgdal))
```

The dataset is then downloaded and reads the OGR data source into a Spatial vector object (`countries`).

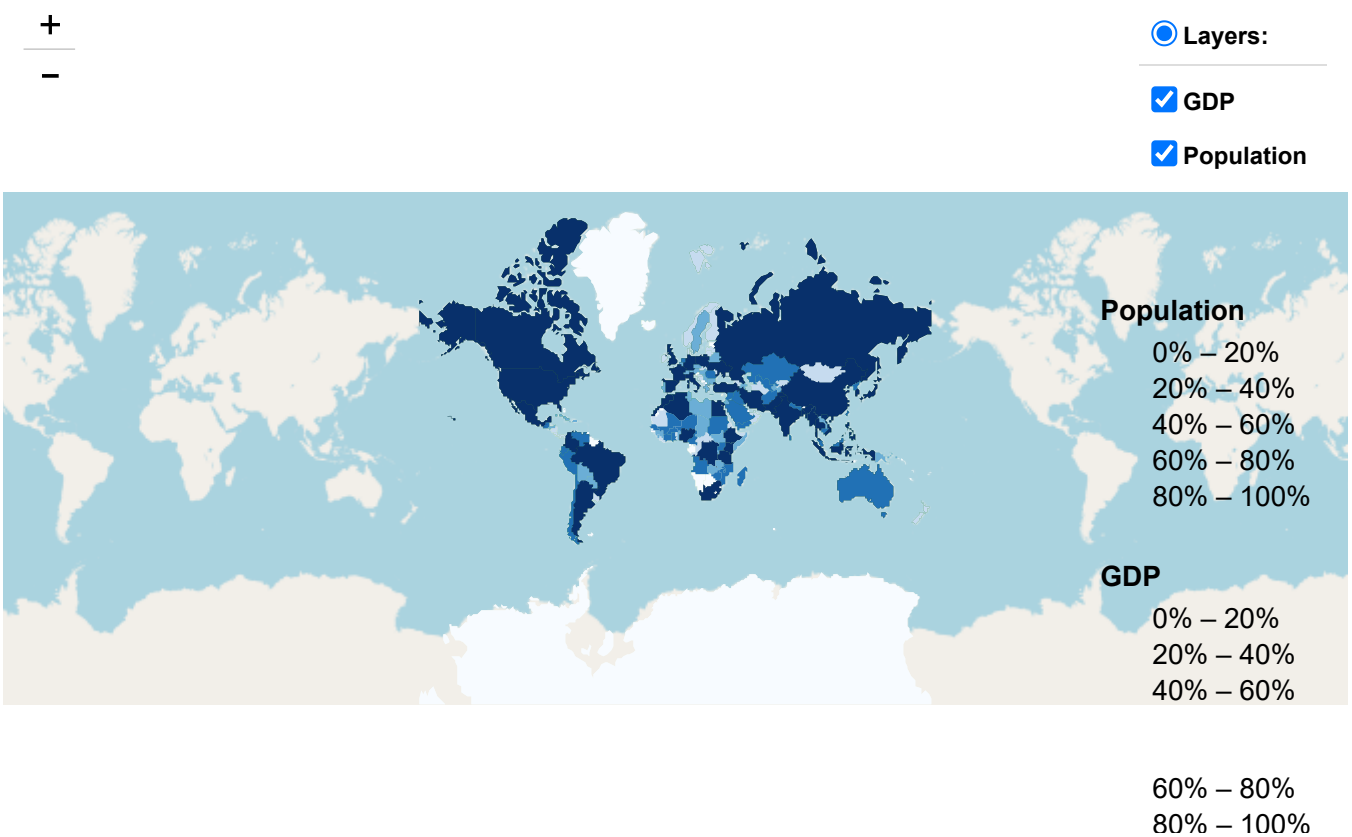
```
resource <- "https://raw.githubusercontent.com/datasets/geo-boundaries-world-110m/master/countri
es.geojson"
download.file(url = resource, destfile = "countries.geojson")
countries <- readOGR("countries.geojson", "OGRGeoJSON")
```

Leaflet commands are used to render a world map base layer, and prepare color palettes for GDP and population layers.

```
map <- leaflet(countries) %>% addTiles(group = "Layers:")
gdpColors <- colorQuantile("Greens", countries$gdp_md_est, n = 5)
popColors <- colorQuantile("Blues", countries$pop_est, n = 5)
```

GDP and population heatmaps are added to the base map along with their legends.

```
map %>% addPolygons(
            stroke = FALSE,
            smoothFactor = 0.2,
            fillOpacity = 1,
            color =  ~ gdpColors(gdp_md_est),
            group = "GDP"
  ) %>% addPolygons(
            stroke = FALSE,
            smoothFactor = 0.2,
            fillOpacity = 1,
            color = ~ popColors(pop_est),
            group = "Population"
  ) %>% addLegend(
            "bottomright",
            pal = gdpColors,
            values = ~ gdp_md_est,
            title = "GDP",
            opacity = 1
  ) %>% addLegend(
            "bottomright",
            pal = popColors,
            values = ~ pop_est,
            title = "Population",
            opacity = 1
  ) %>% addLayersControl(
            baseGroups = c("Layers:"),
            overlayGroups = c("GDP", "Population"),
            options = layersControlOptions(collapsed = FALSE)
  )
```



References

- Leaflet commands: https://rstudio.github.io/leaflet (https://rstudio.github.io/leaflet)
- Dataset was obtained from: http://data.okfn.org/data/datasets/geo-boundaries-world-110m (http://data.okfn.org/data/datasets/geo-boundaries-world-110m)

Disclaimer

This project was submitted as part of the Developing Data Products (https://www.coursera.org/learn/data-products) course offered by Johns Hopkins University through Coursera.