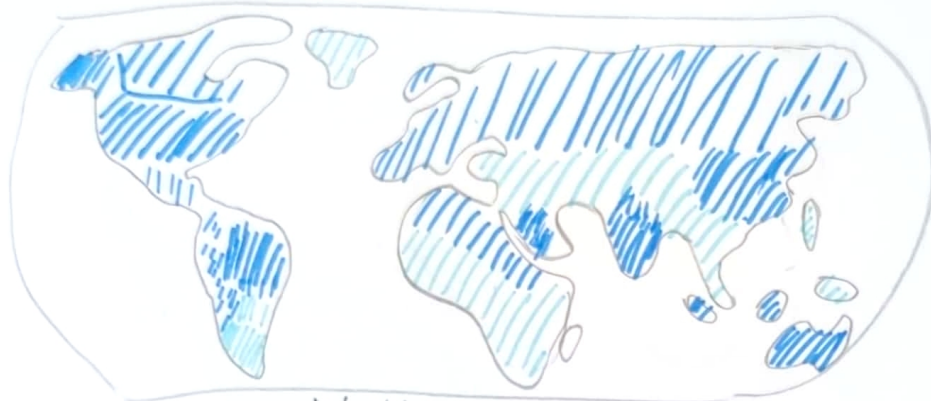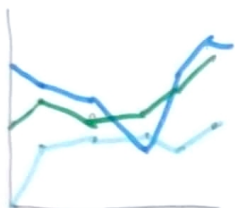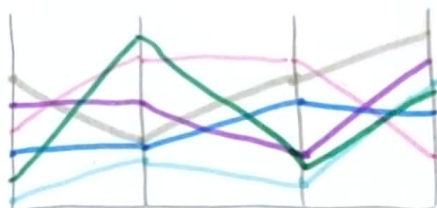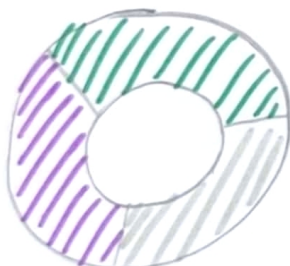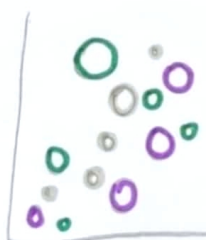# IDEAS

CO2 Emissions

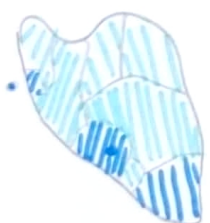World map

Pointed line plot

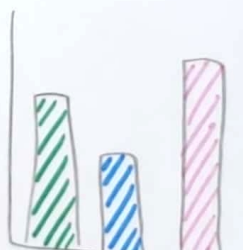Parallel coordinate plot
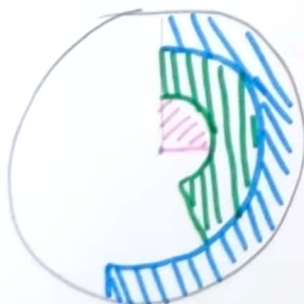

donut chart

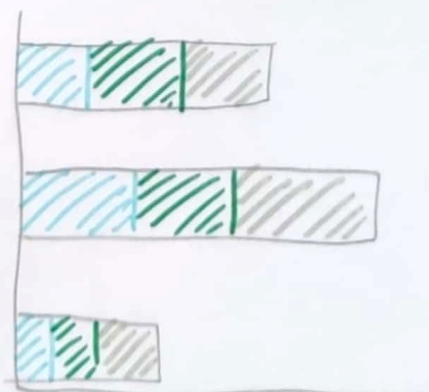scatter bubble plot

Symbol scatter plot

Malaysia Map

Bar chart

Radial Bar chart

Stacked Bar chart

SHEET 1

Name: Rizlan Mohamed Reza

ID: 33550166

FILTER

World Map
- Visualise global CO2 emission effectively.
- Viewers feel familiar.

Pointed line plot
- Straight to the point plots

Donut Chart
- Visualise different population types.
- Easy to gauge proportions for low number of categories (2-5)

Parallel Coordinate
- More sophisticated idiom
- Easier to see trends and relationships between different categories/sector

Bar/Stacked Bar chart
- Visualise a category across different years.
- Simple

CATEGORIZE

Maps (main) — World map, Malaysia map
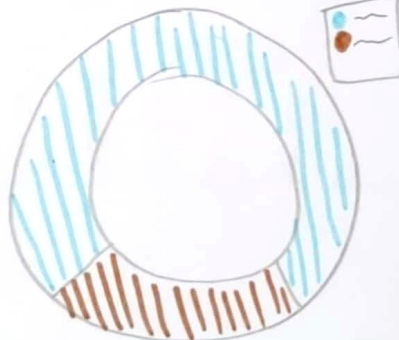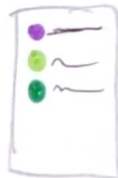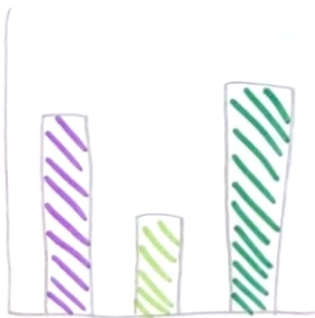
Other Idioms — Donut, Line, Parallel Coordinat, Bar

Layout

CO2 Emissions

Year: ⊂━━━━━━━⊃ 2021

Emissions by sector
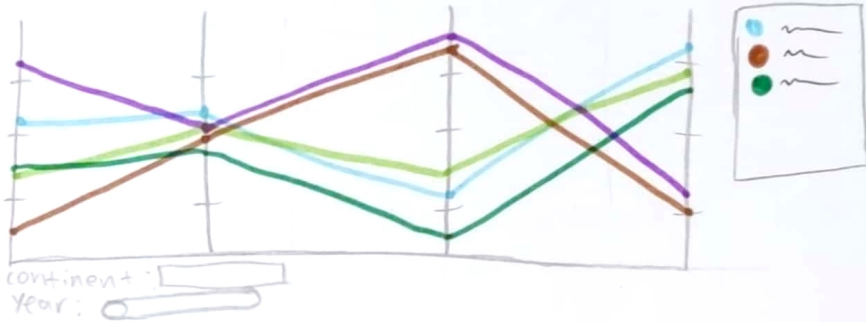
continent: ▭
Year: ⊂━━━━⊃

SHEET 2

Rizlan mohamed Reza

33550166

Focus

• The two maps are the main focus.

OPERATIONS

• Users can drag sliders to view information from different years.

• Users can choose which continent to view in the Parallel coordinate plot.

• Users can hover over plot points / channels to view tooltips for further info.

DISCUSSIONS

+ Layout is clean & tidy

+ Graph's visualise information appropriately

− Parallel coordinate axis is difficult to implement.

− Lacking interactivity & animation.

LAYOUT
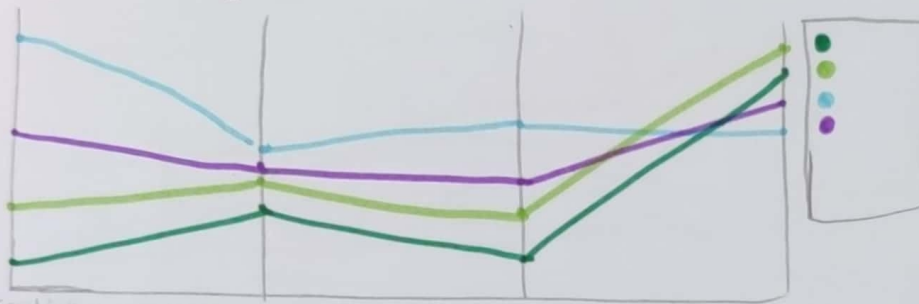
Year: ⊙▭

Emissions by sector

Continent: ▭
year: ⊙▭

country GDP

country: ▭

Malaysia states GDP

year ⊙▭

Malaysia states GDP

Zoom: ⊙▭

OPERATIONS

- Users can drag sliders to view different time frames.
- Users can select countries of different continents in the ~~parallel~~ Emissions by sector plot.
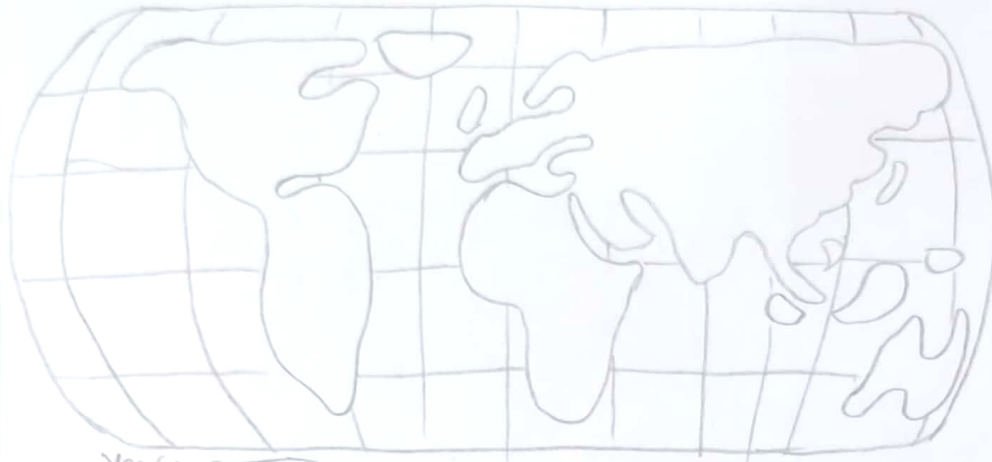- Users can zoom in on the map (malaysia).

DISCUSSIONS

+ Layout is clean & tidy
+ Continent selection allows choice for users (as with country GDP).

- Parallel coordinate is difficult to implement
- Two bar graphs makes it repetitive
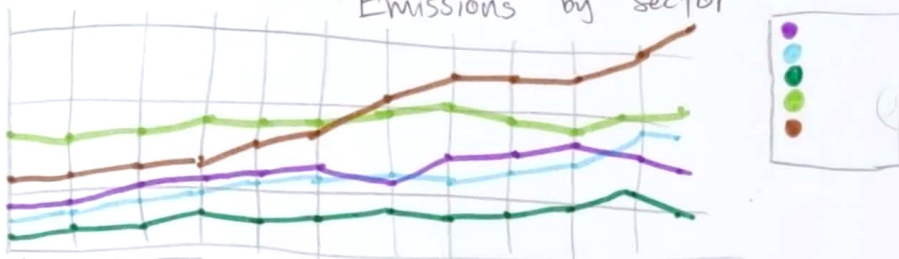- Although the Malaysia map is zoomable, it only zooms in the middle.
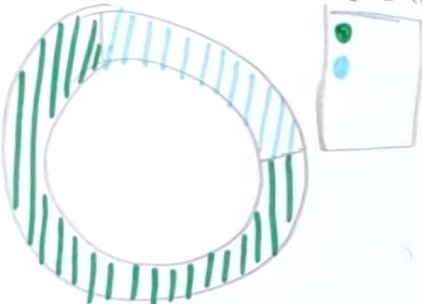
LAYOUT

world emissions
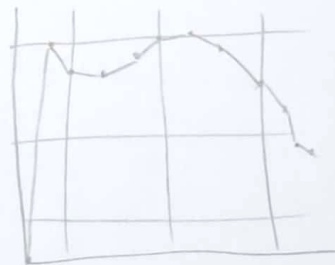

Year: ▭

Emissions by sector

Year: ▭

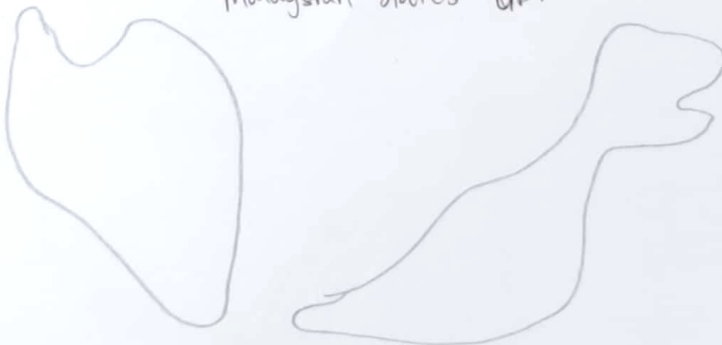## Urbanization in malaysia

Year: ▭   Year: ▭

Malaysian states' GDP

Center: ▭

Zoom ▭

SHEET 4
Rizlan Mohamed Reza
33550166

OPERATIONS

- Users can drag the year sliders to navigate through different time frames of data.

- Users can so filter different sectors to highlight them.

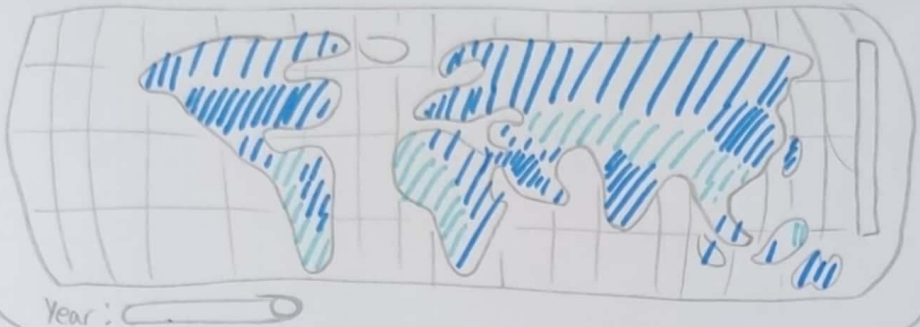- Users can zoom in on Malaysian map with the slider

DISCUSSIONS

+ Layout is clean but could be better

+ The zoomable map can center on different regions so it doesn't zoom into nothing
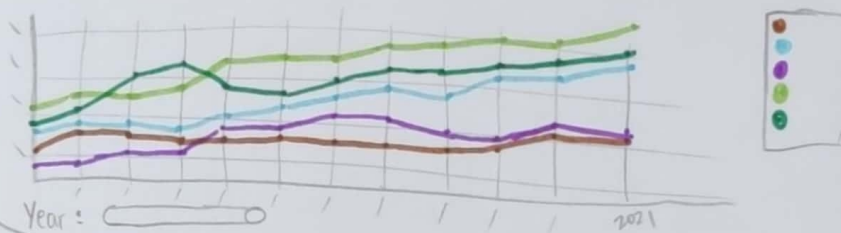
- Too simple
- lacking interactivity

LAYOUT

CO2 Emissions

Rizlan Mohamed Reza
33550166

World emissions

Year: ⬤▭

Emissions by sector

Year: ⬤▭ / / / / / / 2021

Urbanization Malaysia

in 2021, 70%

Year: ⬤▭

Malaysian States' GDP

Center: [MALAYSIA ▾]
Zoom: ⬤▭

OPERATIONS

- Users can hover over plots to reveal tooltips with detailed information

- Users can utilize sliders to navigate through time to view different data.

- Users can highlight different sectors by selecting a legend.

- Users can zoom into the Malaysian map & choose which region to center.

DETAILS

- Estimated completion time 2 weeks.

- Research is needed for HTML layouts and designing with CSS.

- Needs multiple datasets & lots of cleaning & wrangling.

- Need to find a different topojson file for the Malaysian map.