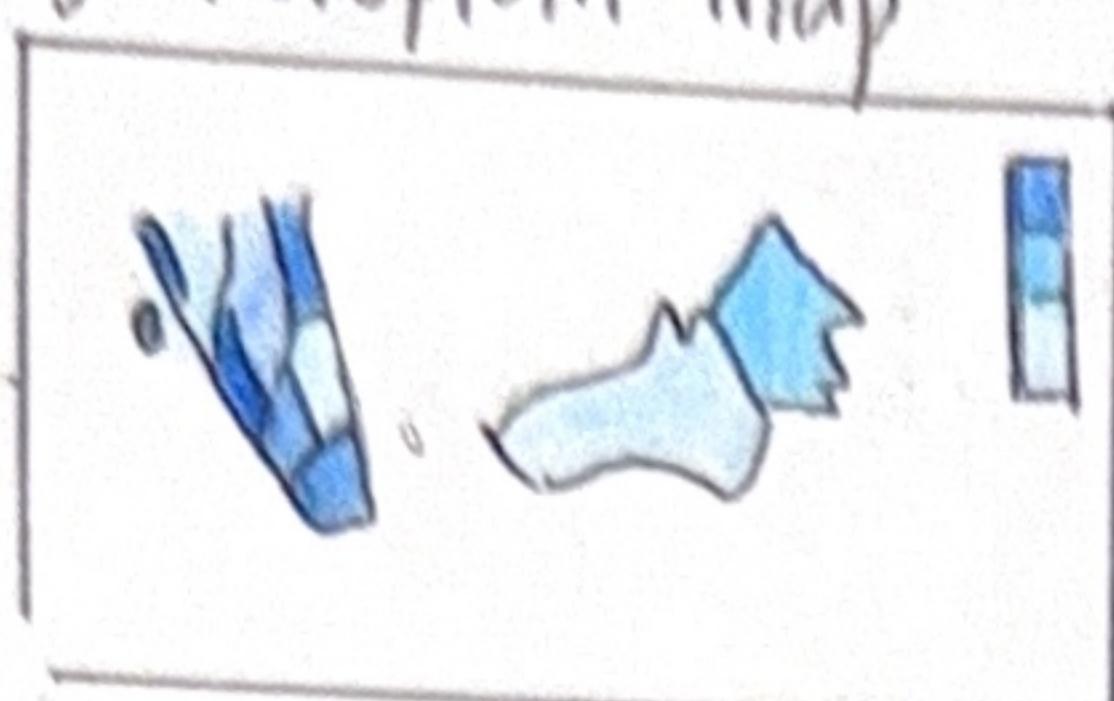


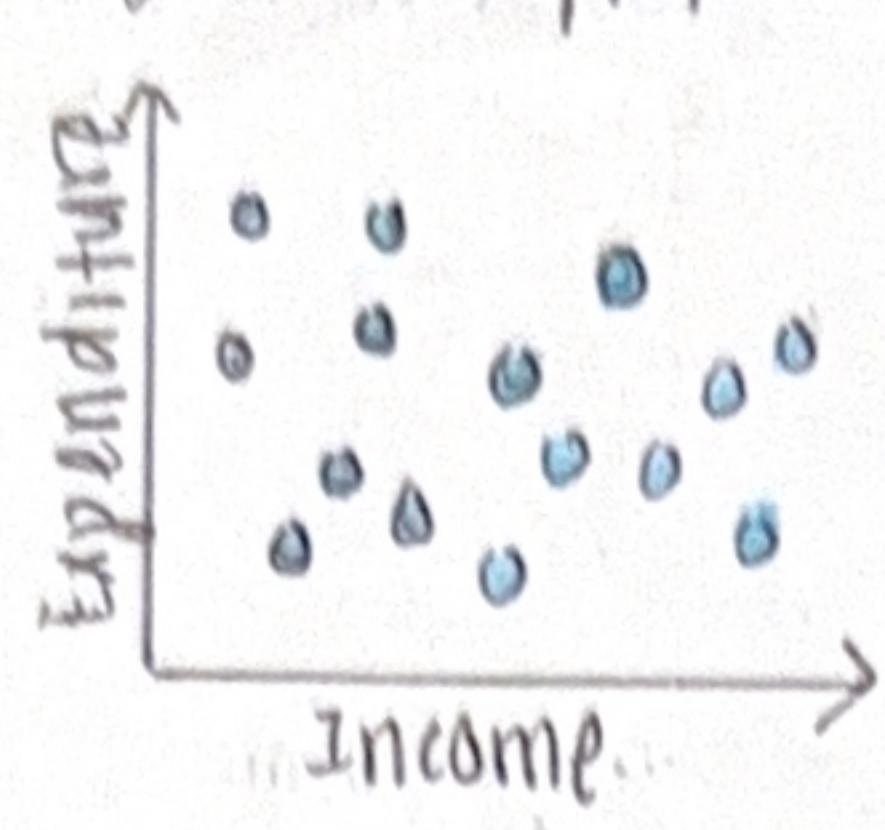
IDEAS

1) quantitative attribute

a) choropleth map

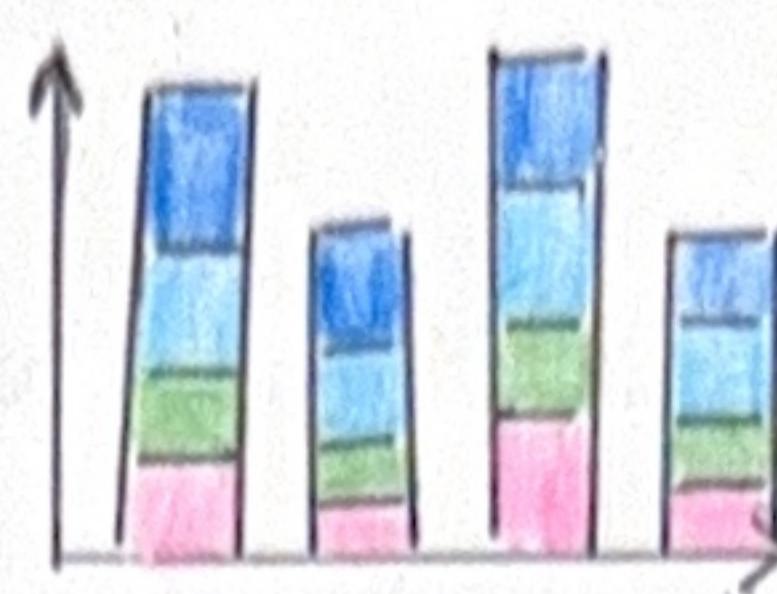


b) scatter plot

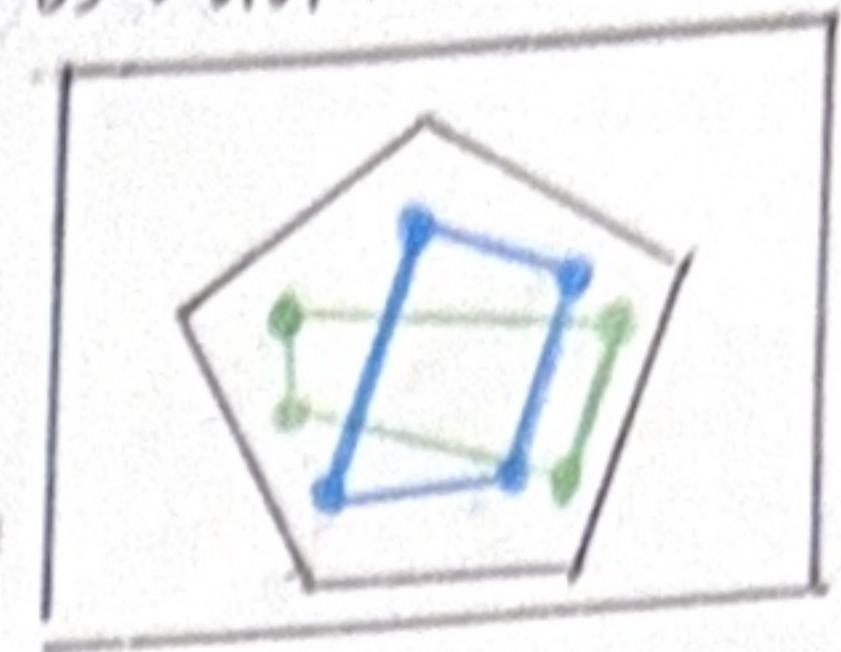


c) categorical attribute

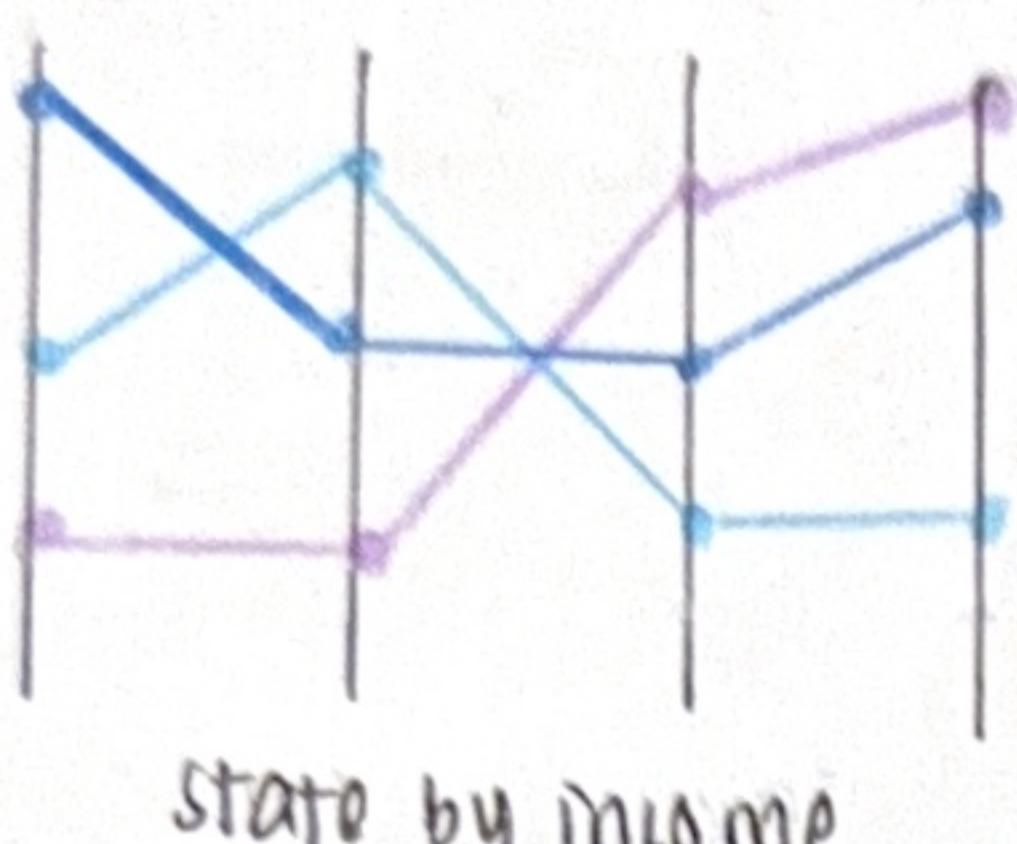
a) stacked bar chart



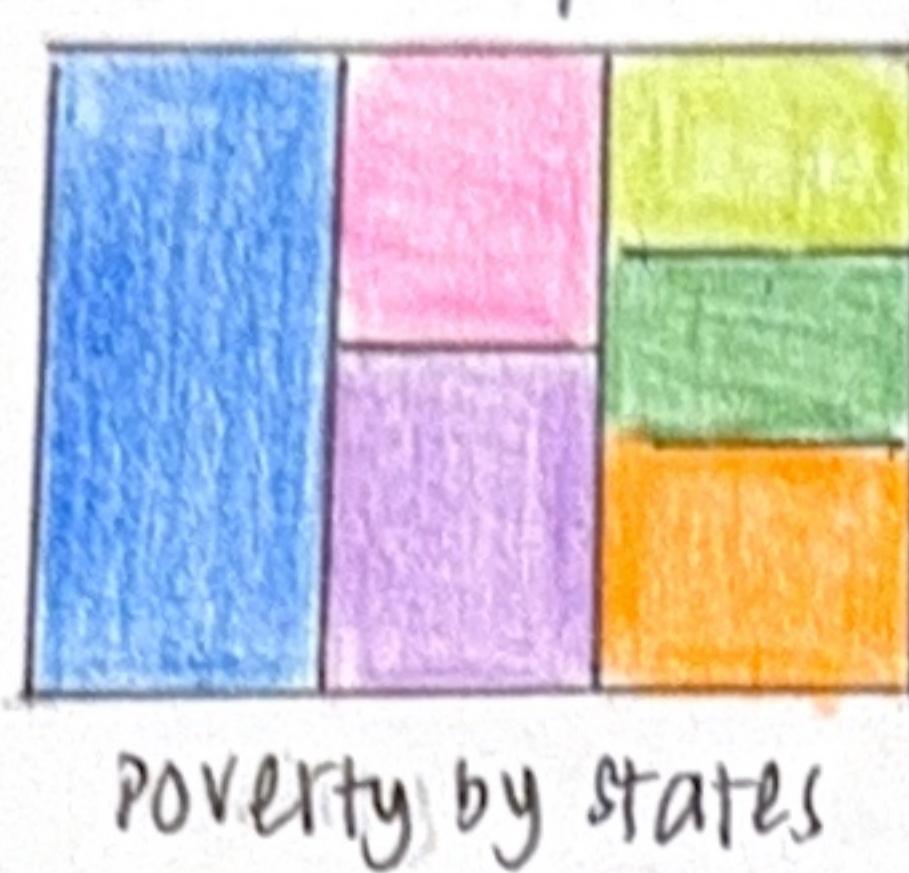
b) radar chart



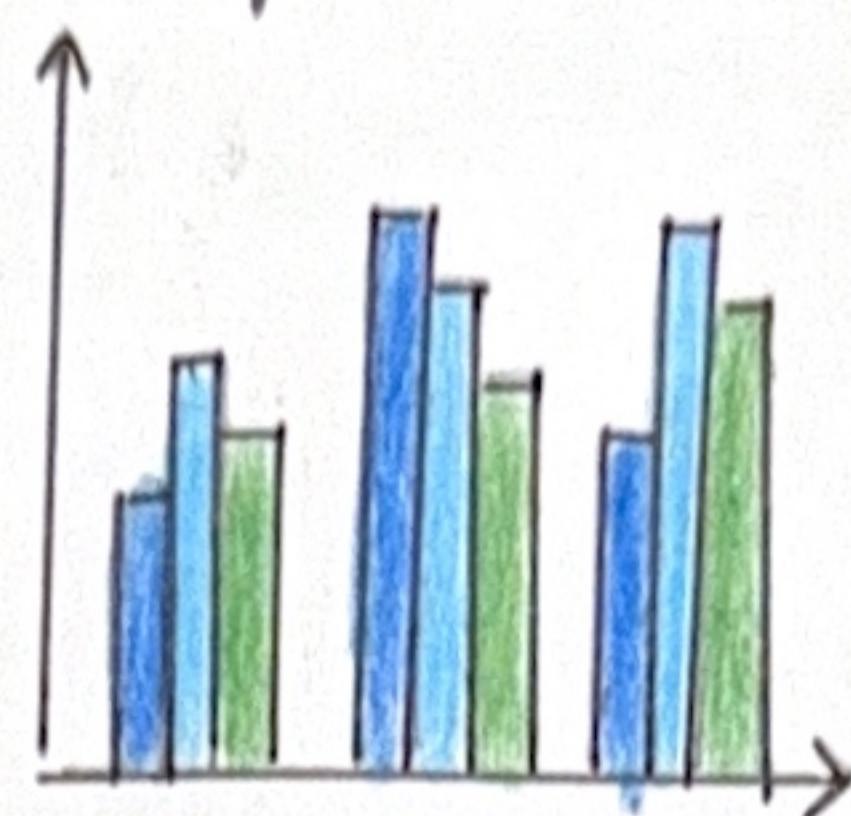
c) bump chart



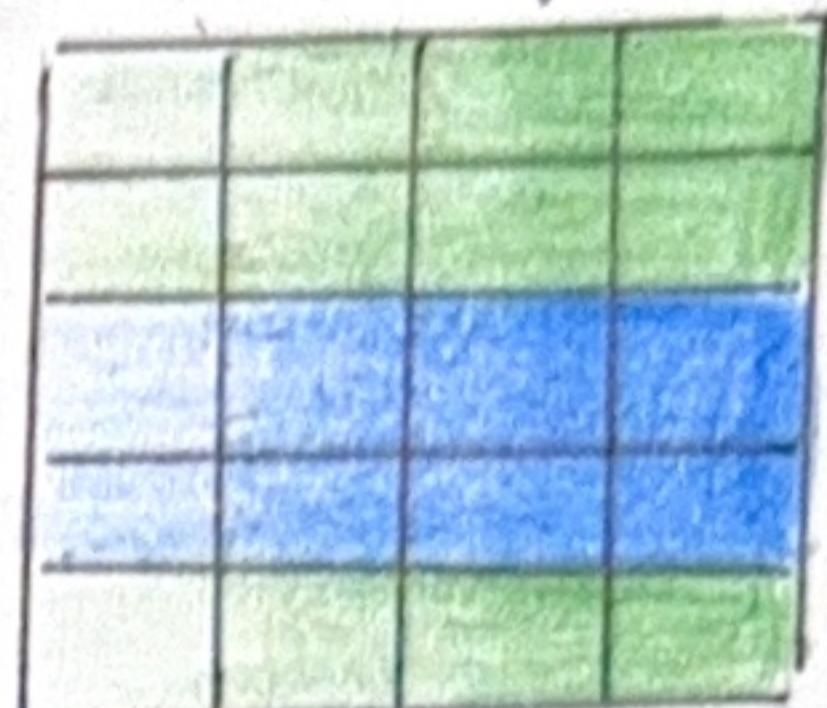
d) treemap



c) grouped bar chart

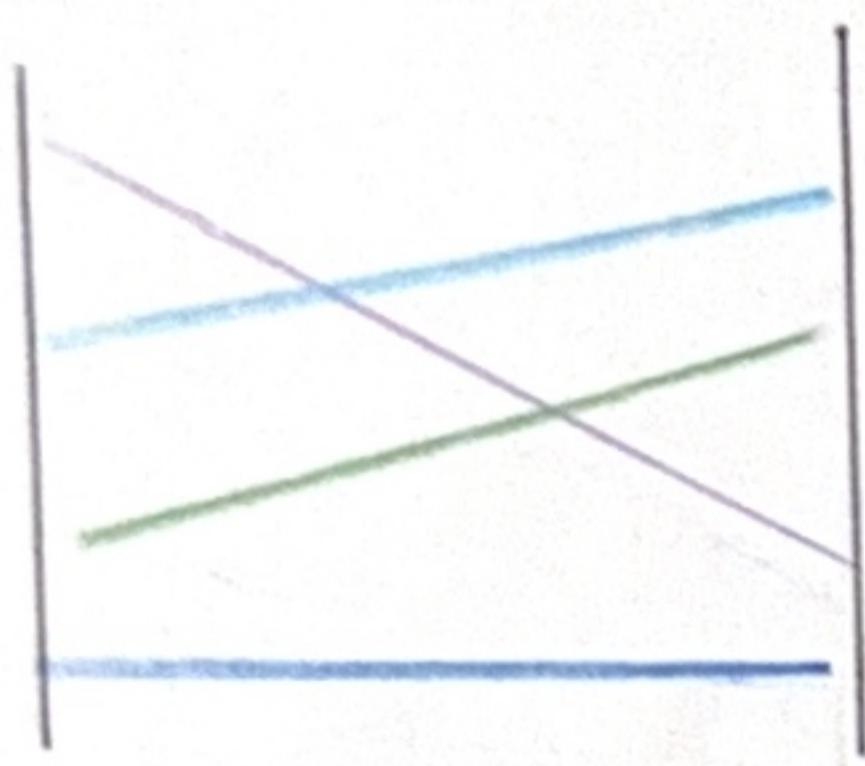


d) heatmap

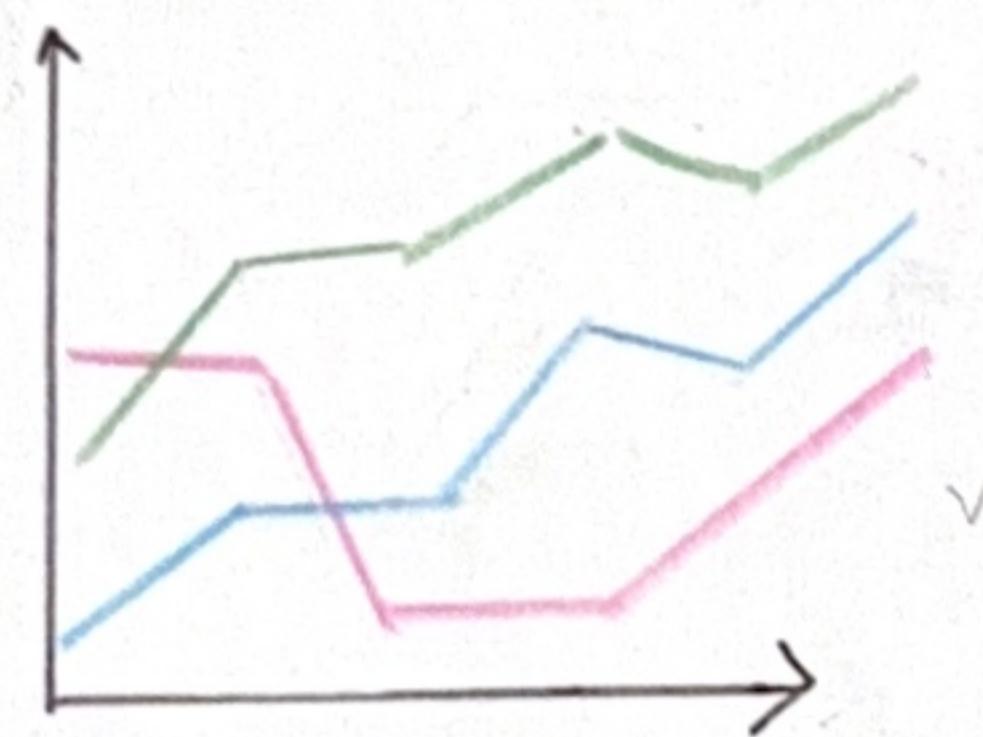


3) temporal attribute

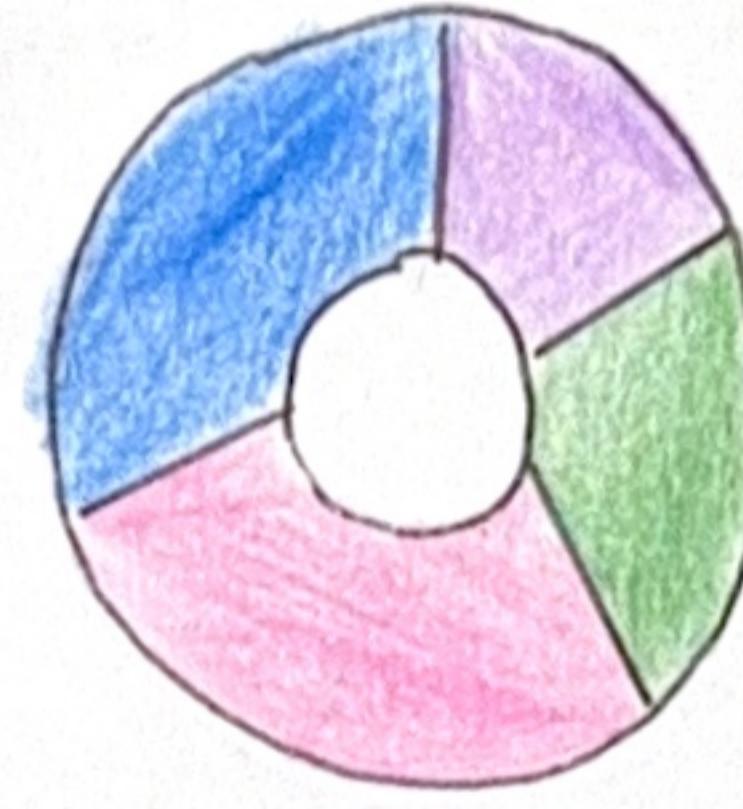
a) slope chart



b) line chart

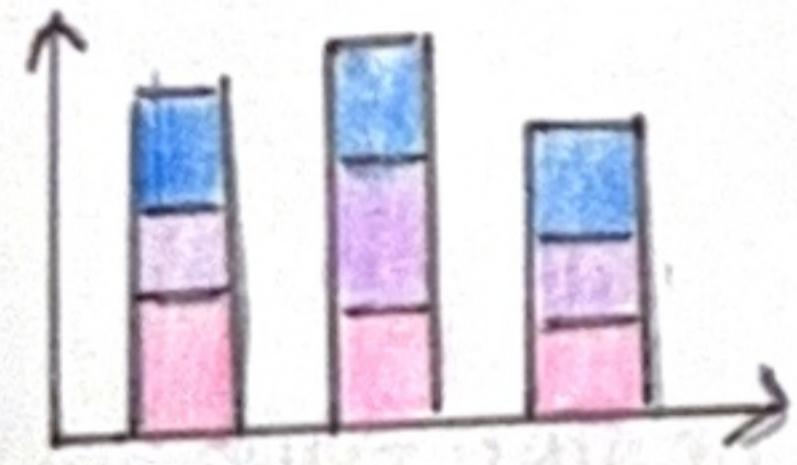


e) donut chart



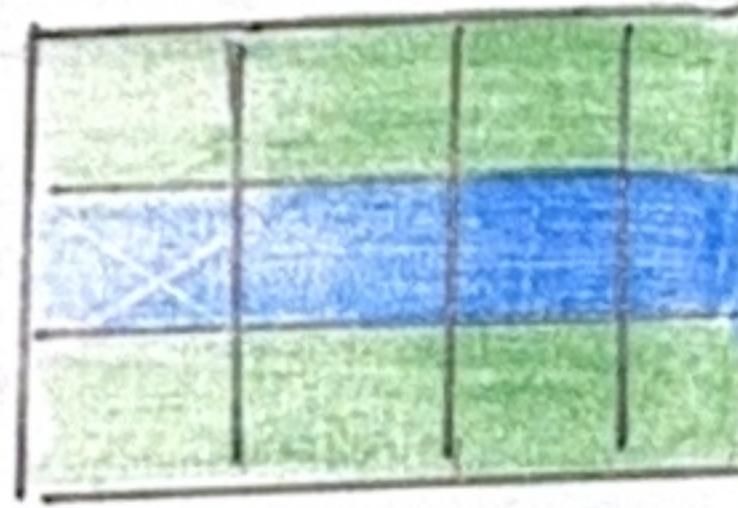
Filter

① stacked bar chart



→ Hard to compare across categories for diff states

② heatmap



→ trend over time can be better communicated using line/area charts.

category

Malaysia's Household Economics

✓
categorical
→ state

↓
quantitative
→ income

temporal
→ year

→ living quarters

→ expenditure

→ household type

→ poverty rate

→ year

→ gini coefficient

visualisations

2a → stacked bar chart

1d → treemap

1e → donut chart

2c → Grouped bar chart

visualisations

3b → line chart

1b → scatterplot

1c → bump chart

1a → choropleth map

visualisation

3a → slope chart

3b → line chart

questions

→ who is the primary audience of the visualisations

→ Is it better to display all years or just one year

→ Should income and expenditure be shown in absolute values or relative shares

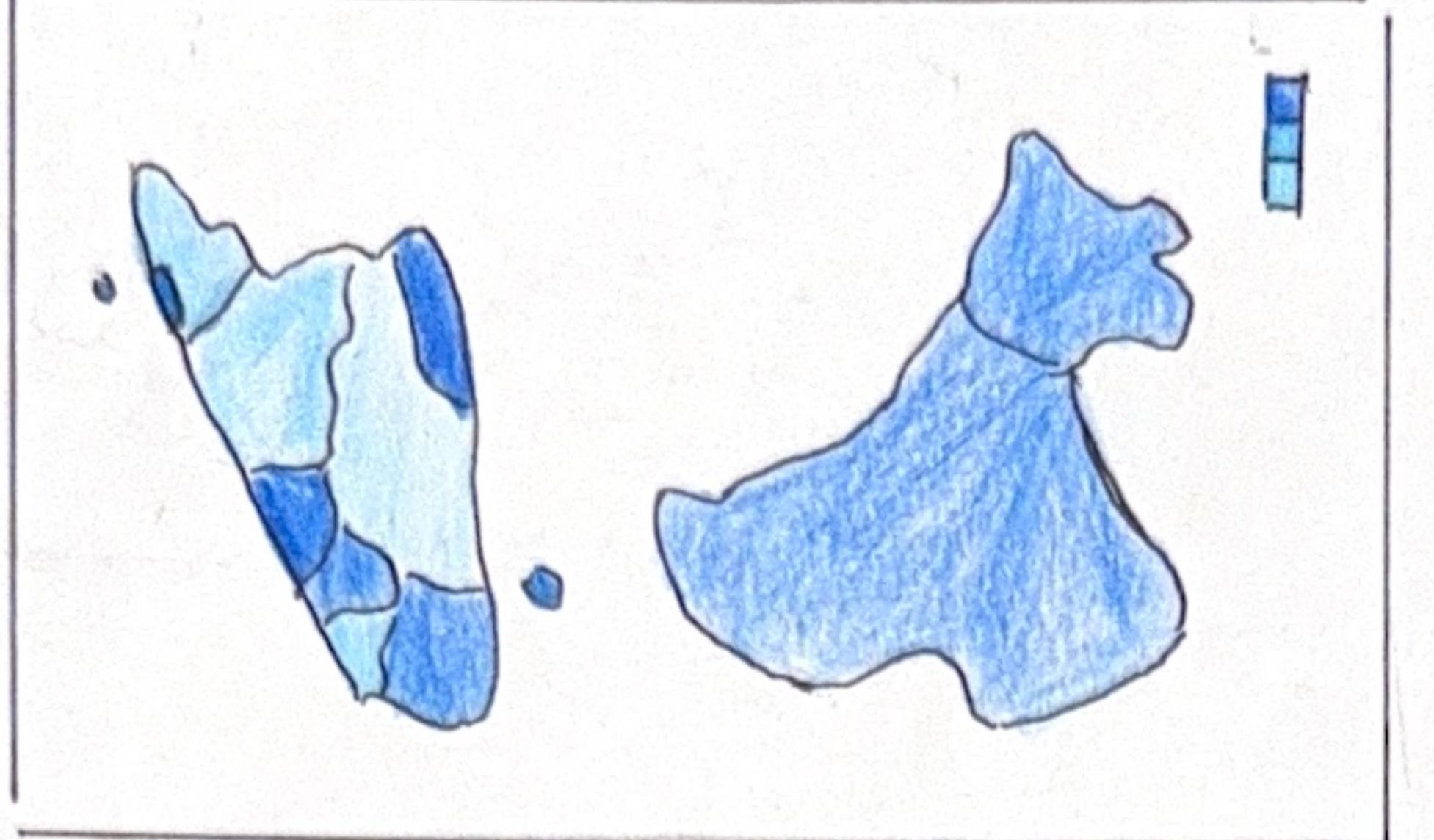
→ Would combining multiple indicators into composite index help audiences or make story less transparent

Title: Idea sheet

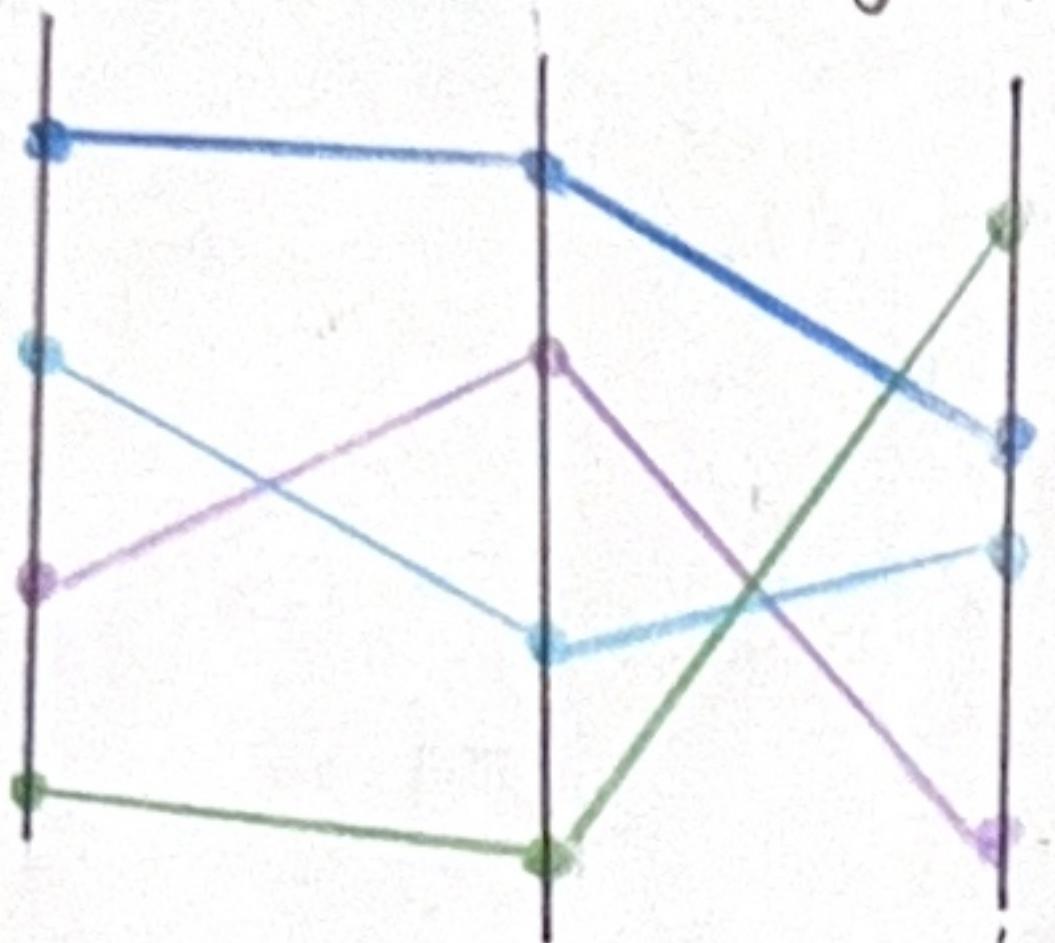
Author: Shee Xuen Han

Layout

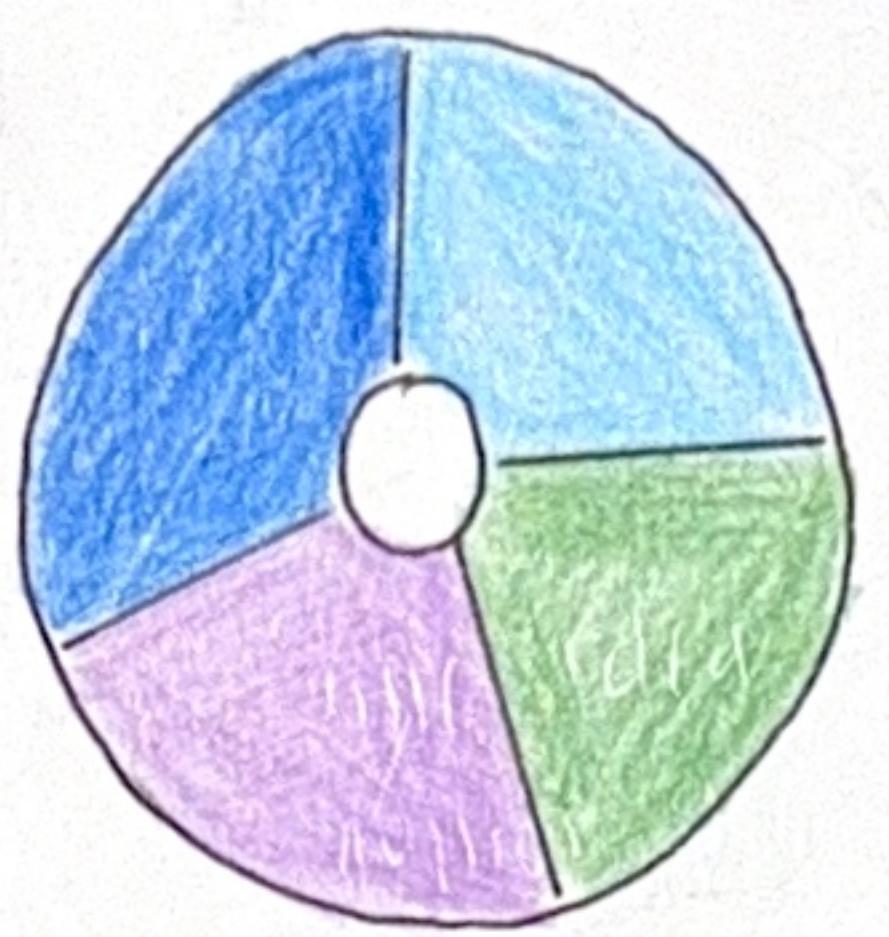
chloropleth map showing mean income



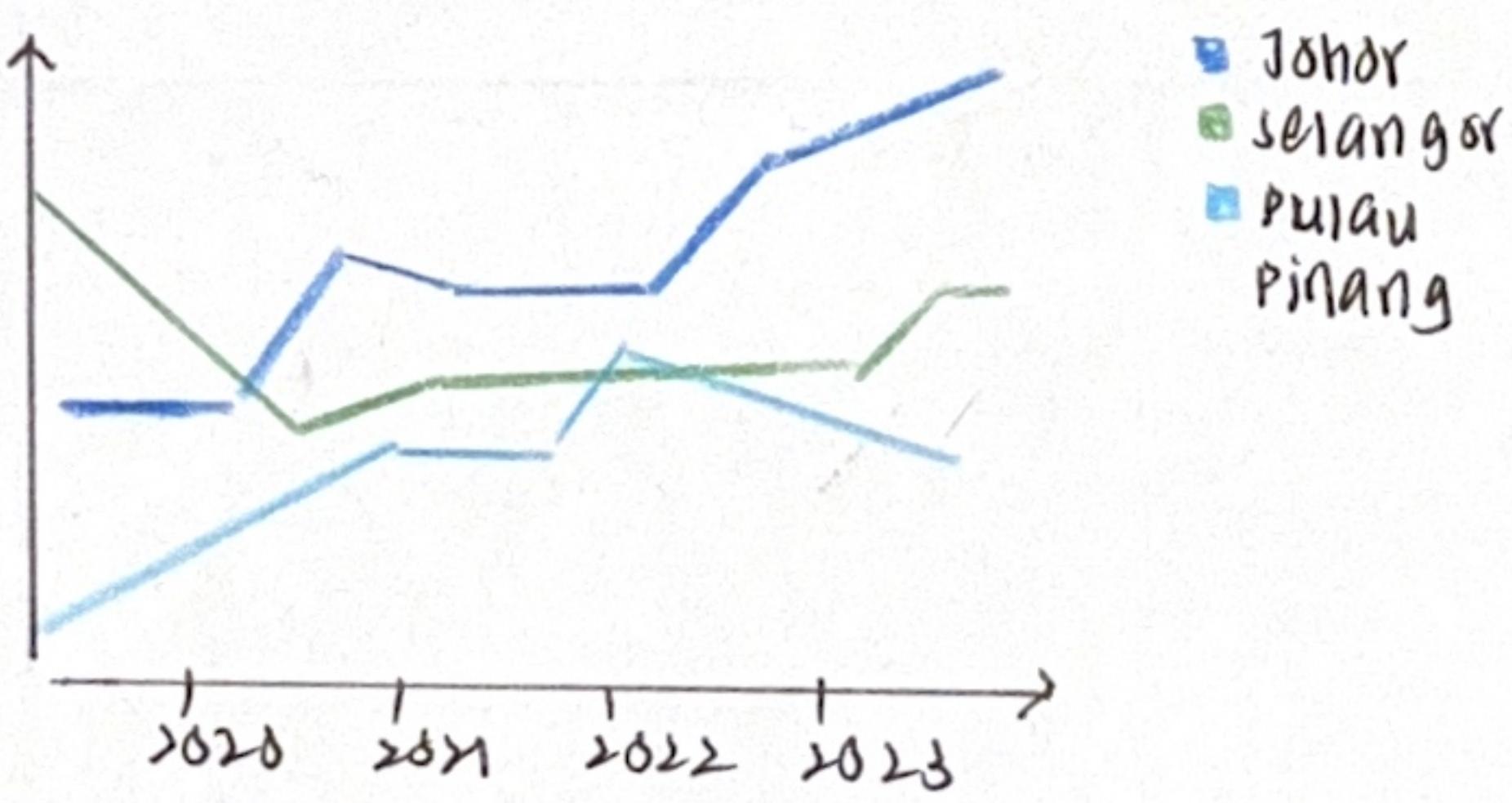
RANK STATE BY POVERTY RATE



DONUT CHART TO SHOW HOUSEHOLD



EXPENDITURE OVER YEARS PER STATE



FOCUS

- This poster does not emphasise on one single graph but
 - Top panel: Gives a clear overview of mean income of each state in Malaysia
 - Bottom panel: Shows different attributes of each states in detail
- Annotations, legends and consistent color scheme would provide extra clarity and help improving visualisation's clarity

Title: Malaysia's Household Economics

Author: Shee Xuen Han

Date: 23/9/2025

Task: Partitioned poster.

Sheet: 2

Operations

- Filtering by year
 - Users can select specific year to view and focus on
- Dynamic tooltip
 - Hover over to display details like mean income
- Sliders to filter
 - 2020 to 2024
- Zoom on timeline
 - Users can zoom into specific periods
- Category filtering
 - Checkbox to switch between indicators
 - Income
 - Expenditure
 - GDP
 - Poverty

DISCUSSION

Advantages

- Clear overview
 - Top panel is able to provide a big picture overview of mean income of each states in Malaysia while bottom panel shows more specific aspects

- Ability to provide multiple perspectives in one view

- Interactivity for exploration

- Filters, tooltips allows users to focus on more desired states or years

Disadvantages

- Filter complexity
 - If multiple filters are provided, users might be confused how each filter affects the views

- Chart junk

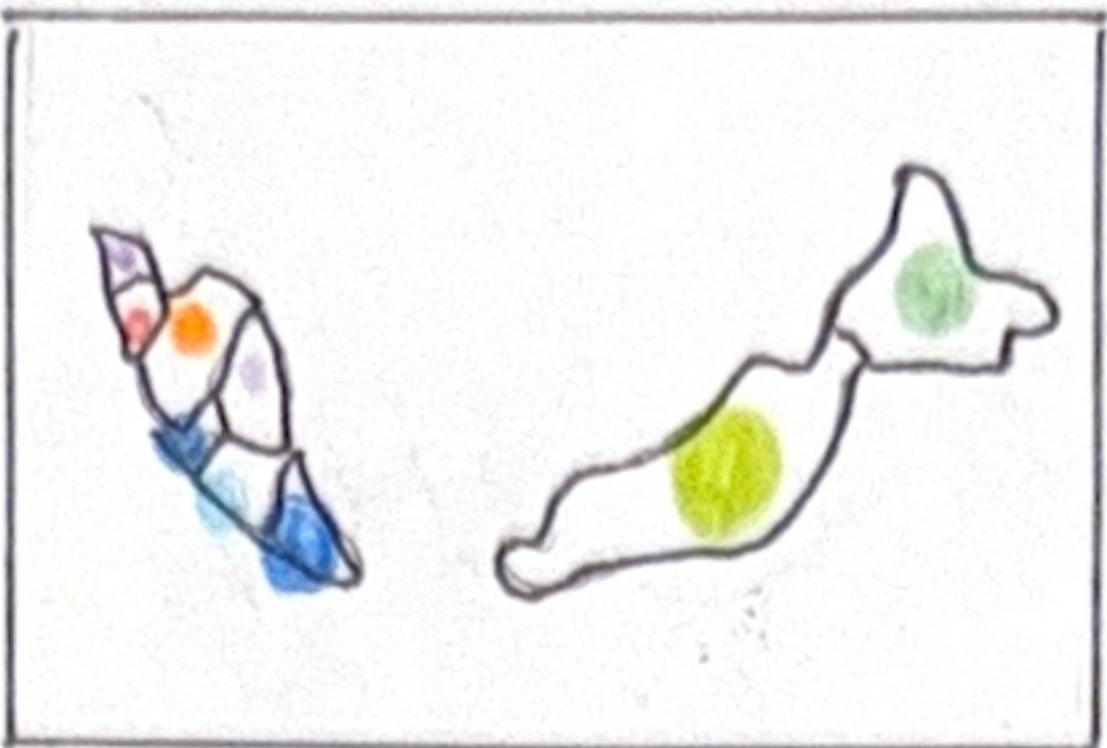
- Annotation clutter
 - Adding too much annotations may clutter the visualisation

- Limited space

- Each chart has limited space

layout

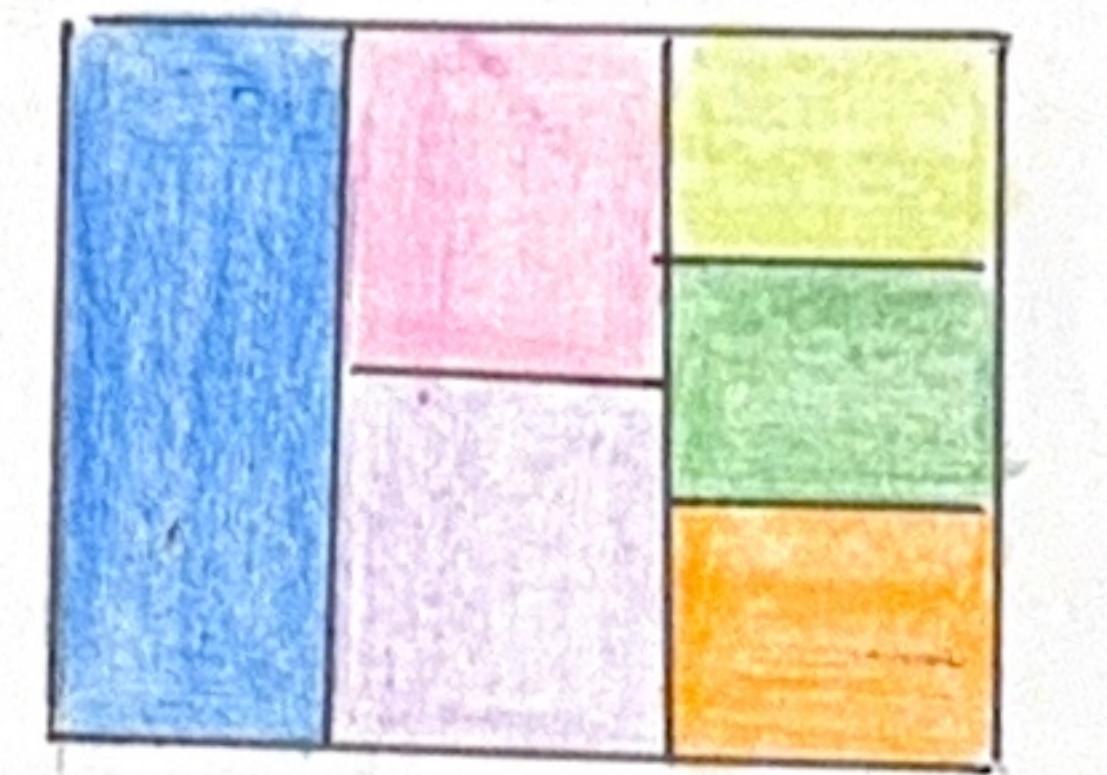
INCOME



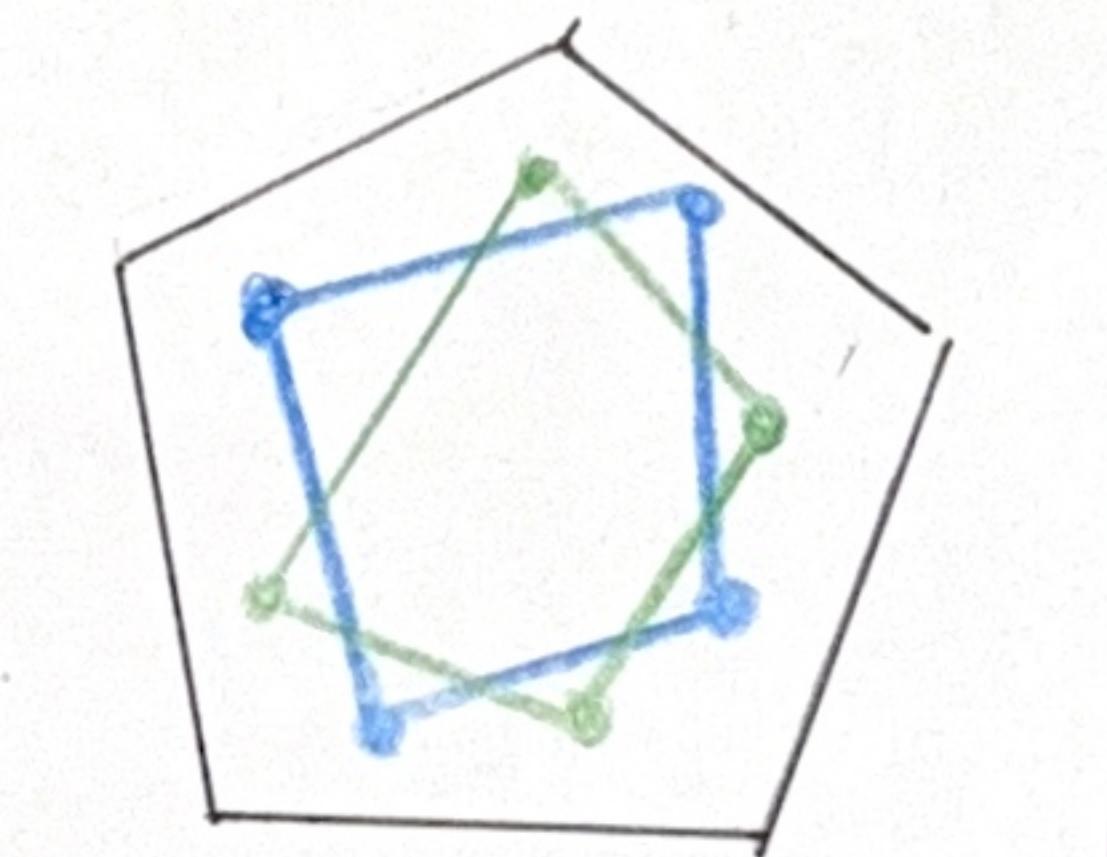
POVERTY vs EXPENDITURE



HOUSEHOLD



COMPARISON



FOCUS

- Narrative flow
 - slideshow shows storytelling techniques, transitions from income to poverty to household to overall comparison
- Progressive details
- Consistent encoding
 - colors and category labels stay uniform across charts, reinforcing comparisons.
- Multi-view coordination
- Interactive filters
 - allow users to focus on specific years or states

Title: slideshow

Author: shee xuen han

Date: 23/9/2025

Task: design a storytelling slideshow

sheet: 3

operations

- ① Filtering by year
 - users can select specific years to view and focus on
- ② Hover and tooltips
 - detailed values like mean income, poverty rate, gini coefficient show on mouse hover
- ③ zoom on timeline
 - users can zoom into specific periods
- ④ can press button or click next to walkthrough
 - provide interactive walkthrough to allow viewers to have better understanding of the visualisation

DISCUSSION

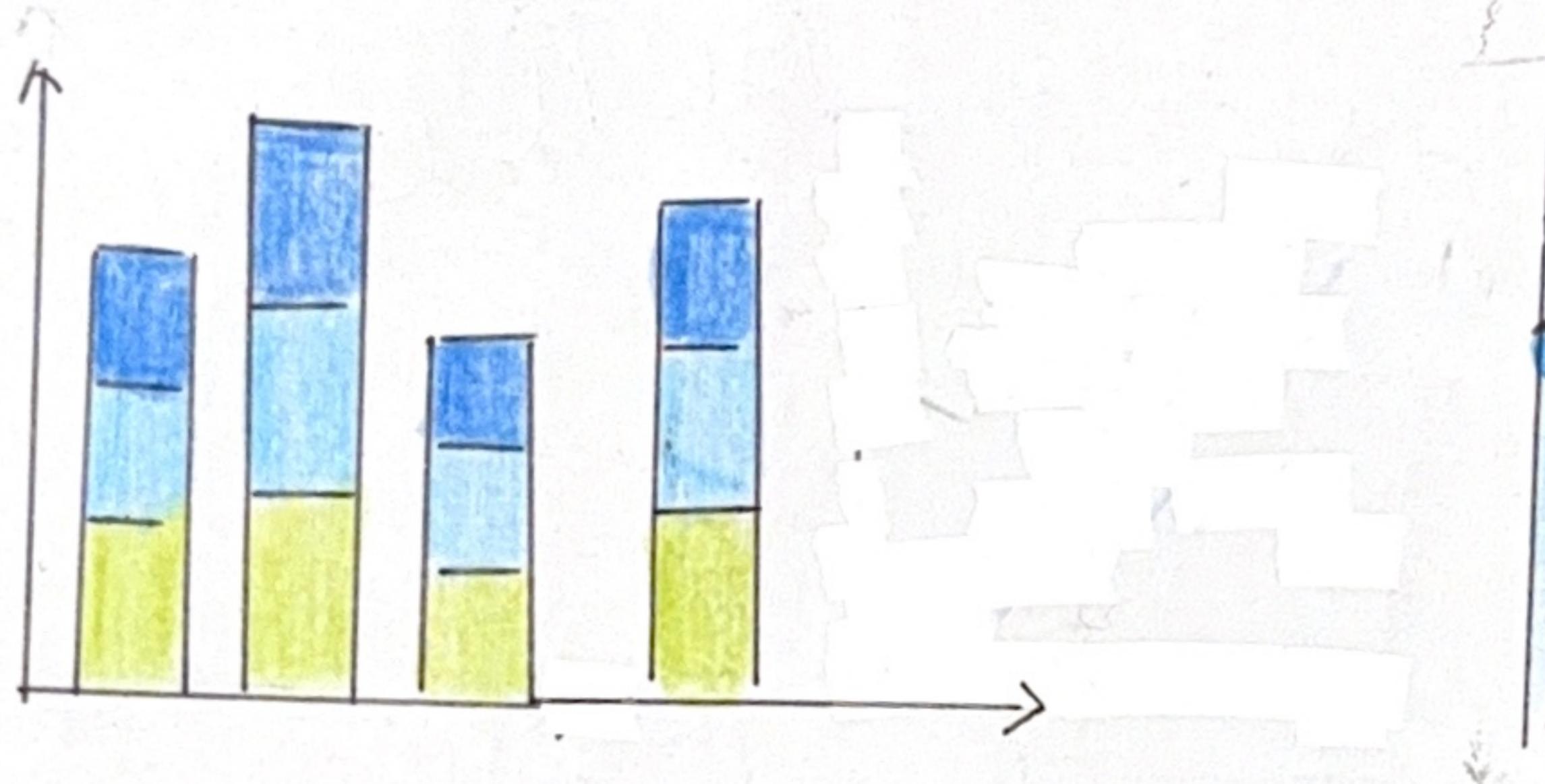
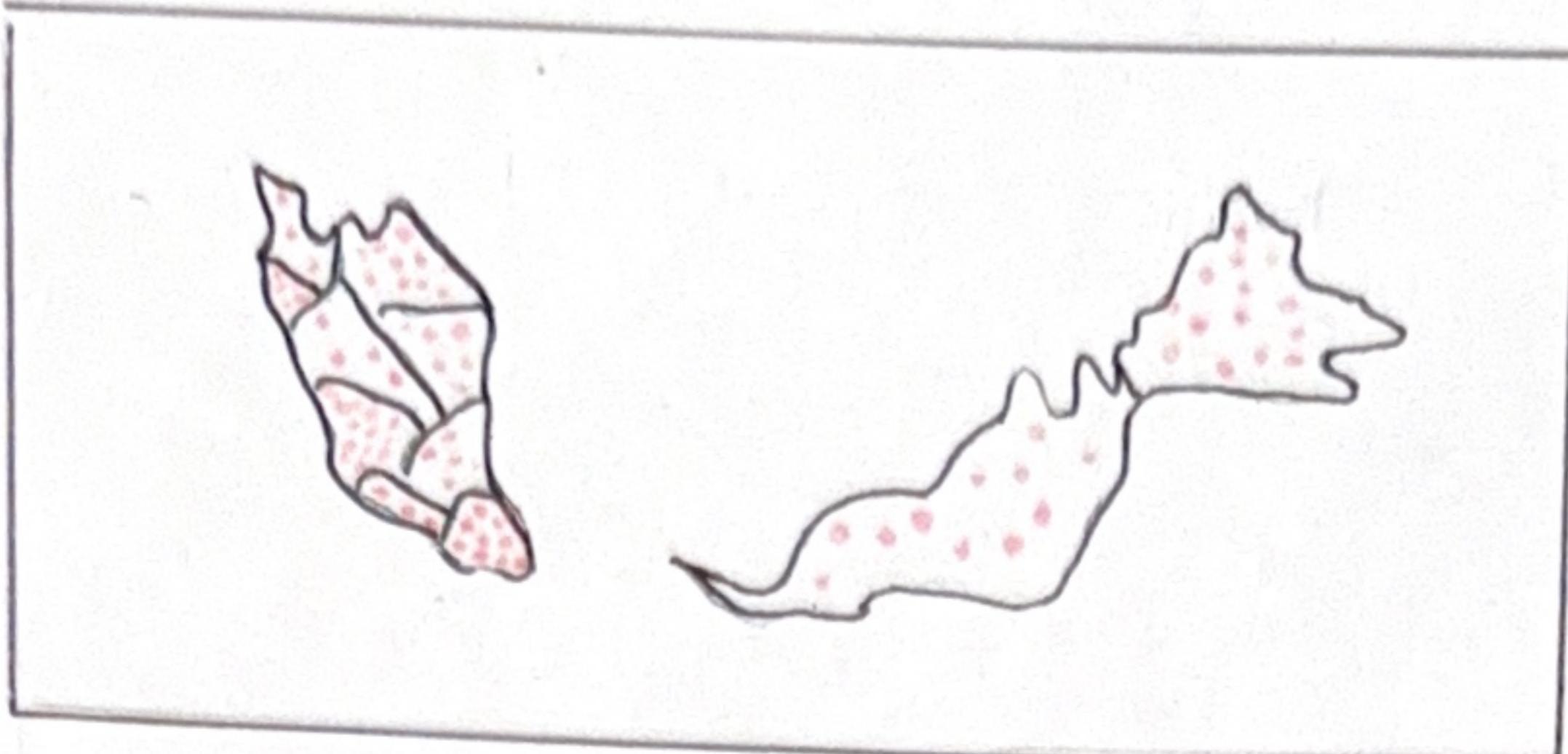
Advantages

- ① Narrative flow/storytelling
 - slideshow mimizes a story
 - makes it easy for viewers to follow
- ② Progressive disclosure
 - users are not overwhelmed
 - information are revealed step by step, making complex dataset digestible
- ③ Comparison supported

disadvantages

- ① Fragmented context
 - unlike posters, charts are now split across slides making it hard to view all relationships
- ② constraint in interactivity
 - in slideshow, only limited interactive filtering can be applied compared to poster
- ③ less suitable for quick reference

Layout



income

poverty,
Household

comparison

TAKE: Magazine style

Author: Shell Xuen Han

Date: 23/9/2025

Task: Design a scrollable poster

Sheet: 4

Operations

① scroll interaction

- As user scrolls, new section animates in. chart fade or slide in smoothly

- Progress bar will be colored same as focused area color scheme to reinforce context and users are clear which part they are in

② Hover tooltip

- Hover over data reveals exact value

③ Progress bar updates

- Progress bar fills as user scrolls, showing user's progress

④ Filtering

- Filter by year or specific indicator

Focus

① narrative flow

- scroll-based storytelling, guides users step-by-step

② Progress bar

- vertical bar helps to show progress, reinforcing narrative flow and orientation

③ overview with detail integration

④ color consistency

- used same color schemes across charts, maintaining coherence and make comparison easier

⑤ annotations and legends

- highlight insights directly on chart for clarity

Discussion

Advantages

① narrative flow

- scroll based storytelling that naturally guides users through visualizations for different indicators

② Progress bar with color feedback

- Help users to track their progress and reinforce context with matching color schemes

③ user friendly

④ comparative insights

Disadvantages

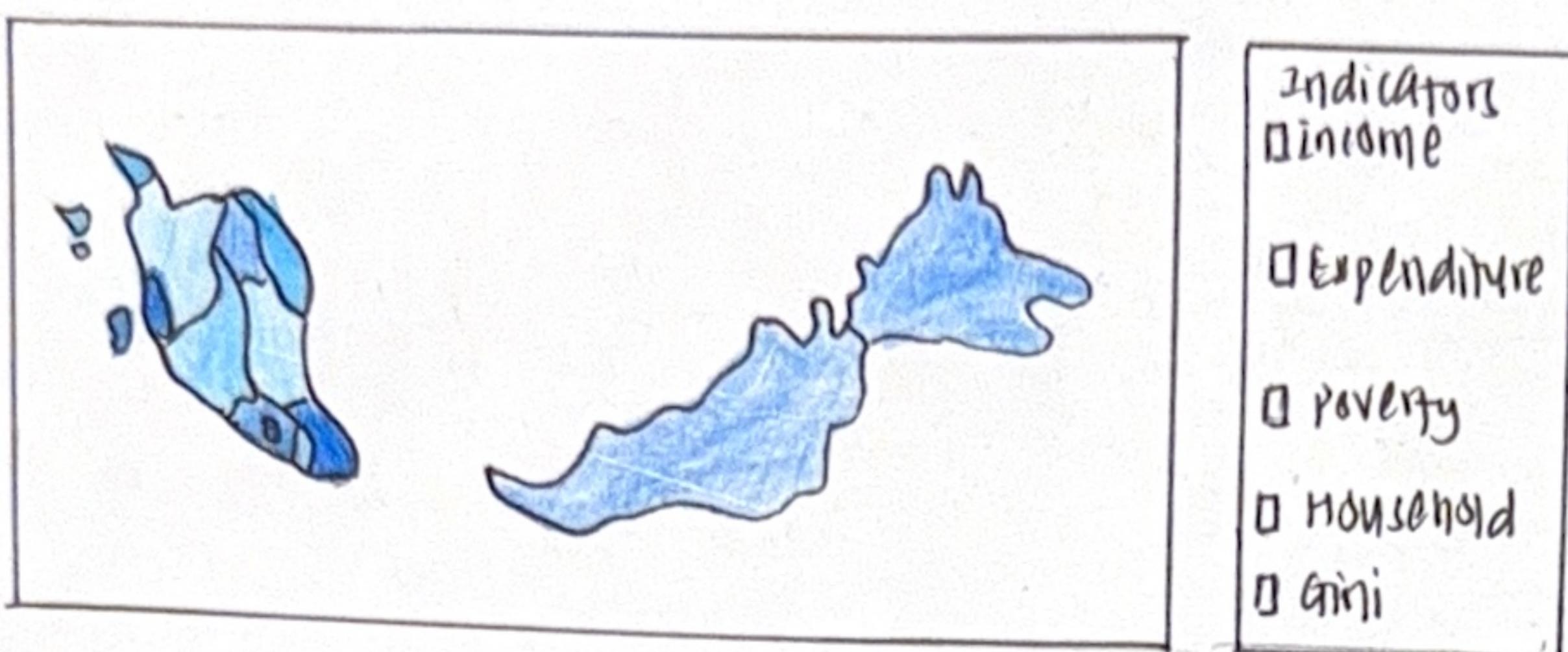
① visual clutter

- with many different charts, users may feel overwhelmed if too much info is provided without guidance

② scroll fatigue

- long scrollable infographic can make it tiring for users to read, especially if they want to jump directly to certain sections.

Layout



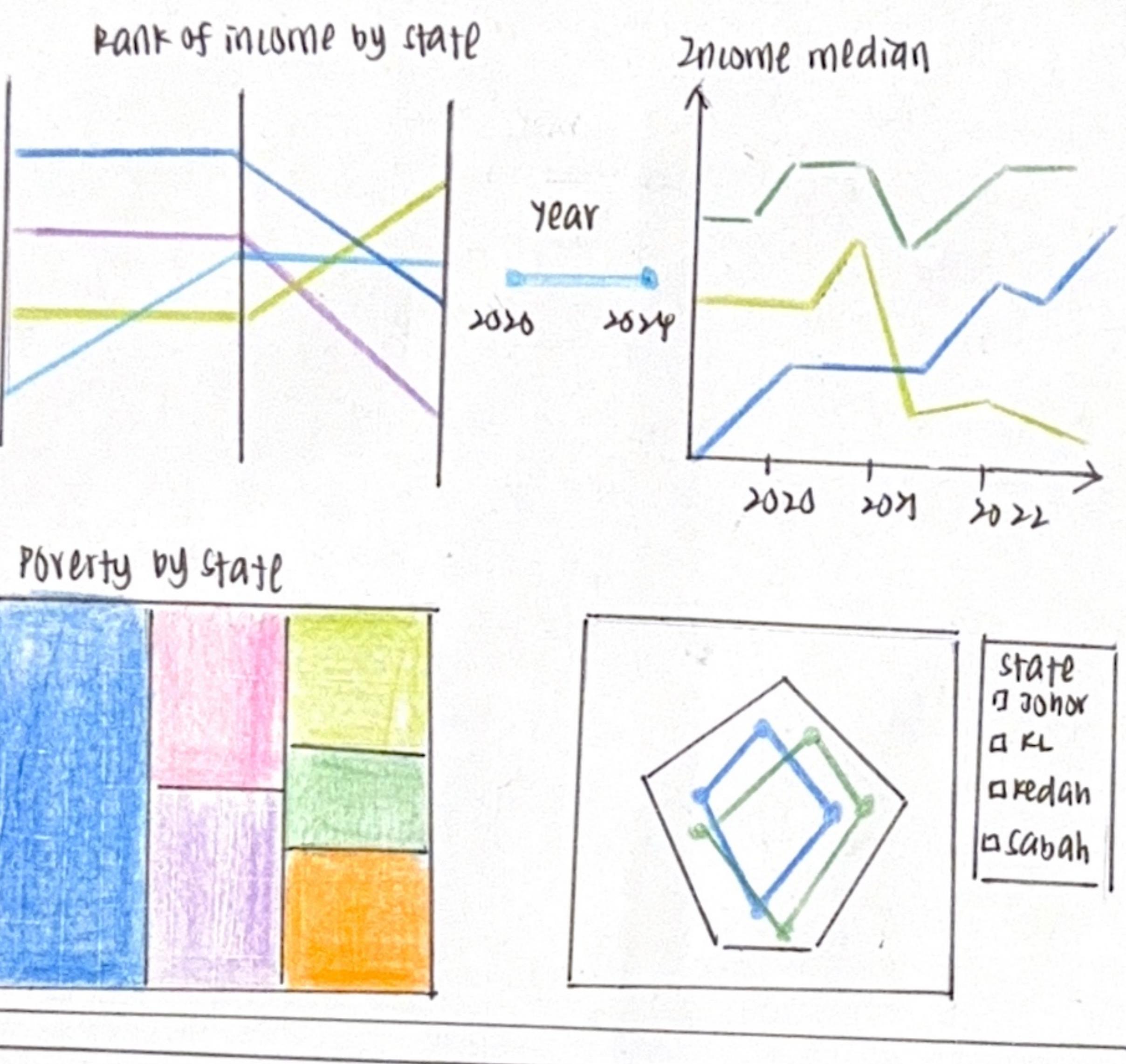
Title: Final Design Sheet

Author: Shee Xuen Han

Date: 23/9/2025

Sheet: 5

Task: Design a final layout from sheet 2



operation

- (1) Filtering by indicator category
→ users can choose specific indicators to focus on in radar chart

-
- (2) Zoom into time range
→ slider allows users to choose specific time range to focus on

-
-
- (3) Hover and tooltip
→ detailed value can be viewed on mouse hover
- (4) Interactive legends
→ legends act as toggle to hide or show specific indicator category
- (5) Annotations to highlight specific trends

Focus

- (1) Partitioned poster layout
→ integrates multiple coordinated views
→ allows readers to explore topic from different angles

- (2) Storytelling flow and progressive details
→ designed to move logically and guides audience step by step

- (3) Consistent colour scheme
→ charts and maps is color-coded consistently to reinforce understanding

- (4) Interactive filters
→ allow users to focus on specific years or indicator categories

Detail

- (1) Descriptions of algorithms
→ visualisation techniques:
 - (a) choropleth map: show mean income across states in Malaysia
 - (b) bump chart: show each states expenditure ranking
 - (c) lineplot: show trend in income across years
 - (d) treemap: show poverty rate of each state
 - (e) radar chart: compare how different each state is across multiple socioeconomic indicators
- (2) Dependencies
 - (a) vegalite for visualisation
 - (b) R for data extraction and normalisation
- (3) Estimated time

→ Data preparation: > hr
→ visualisation: > day
→ interactive feature: 1 day
→ Layout and design: 3 hr