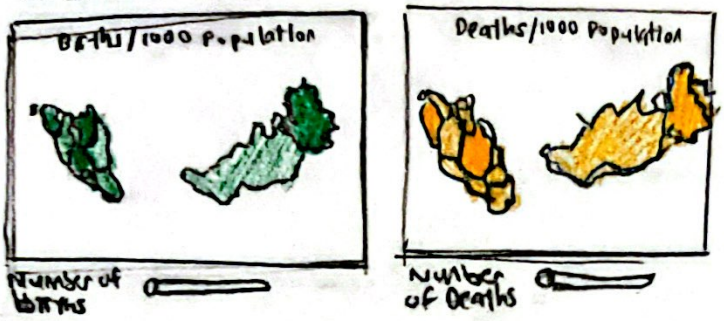
FIVE DESIGN SHEETS #1 DATAVIS 2. FIT3179 33203318 CHAI JUAN YANG

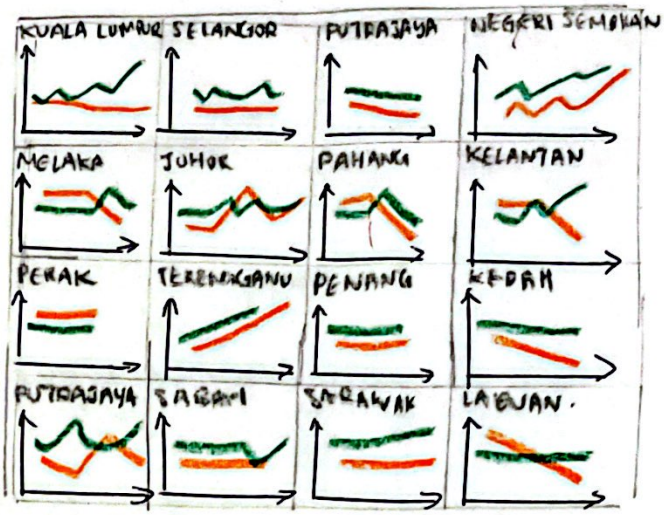
IDEAS



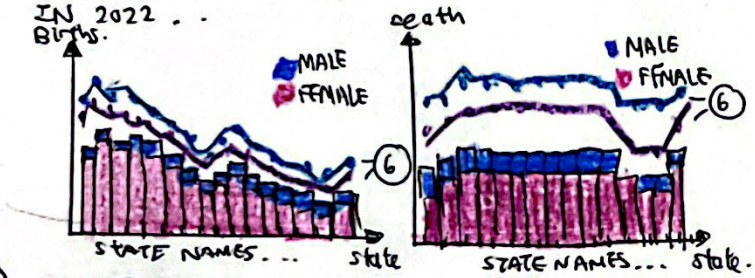
in a certain year (2022 latest)

CHOROPLETH MAP. (1)

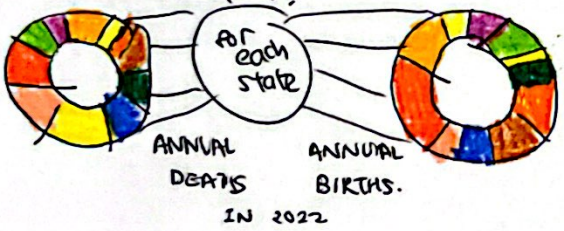
(2) Line chart for Birth & Deaths.
(Small multiples for 13 states).



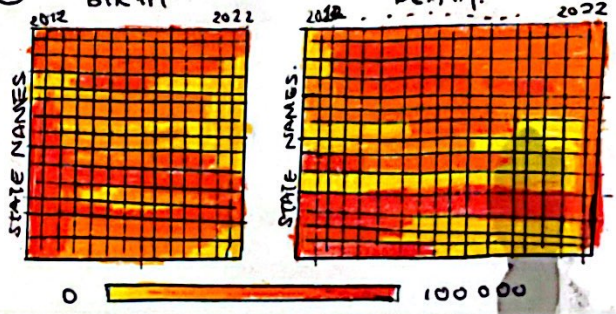
(3) BAR CHART Something with gender?.. or (6) Linechart.



(4) DONUT CHART ??



(5) Heatmaps for state birth & death rates.



FILTER

(1) & (4) are the same, but both can ease user to better understand distributions.

(2) LINECHART
Small windows ✓
One grid for each state.

(3) gender dimension. vs (6) line chart.

bar chart is better to showcase

(5) Heatmap.

showcase all states over the years.

CATEGORIZE.

- able to distinguish by gender
- choropleth map to show birth & death rates
- explore each state.

COMBINE & REFINE

1 & 4 DISTRIBUTIONS IN 2022

gender dimension
-remove line chart.

LINE CHART FOR EACH STATE.

Heatmap. for all states & all years.

4 visualisations

QUESTIONS.

- Is it able to identify states with highest death rates / lowest death rate
- Is it able to identify states with highest birth rates / lowest birth rates.
- Identify which year & state has highest birth rate & lowest death rates.

TITLE: FIT3179 ASSIGNMENT 2
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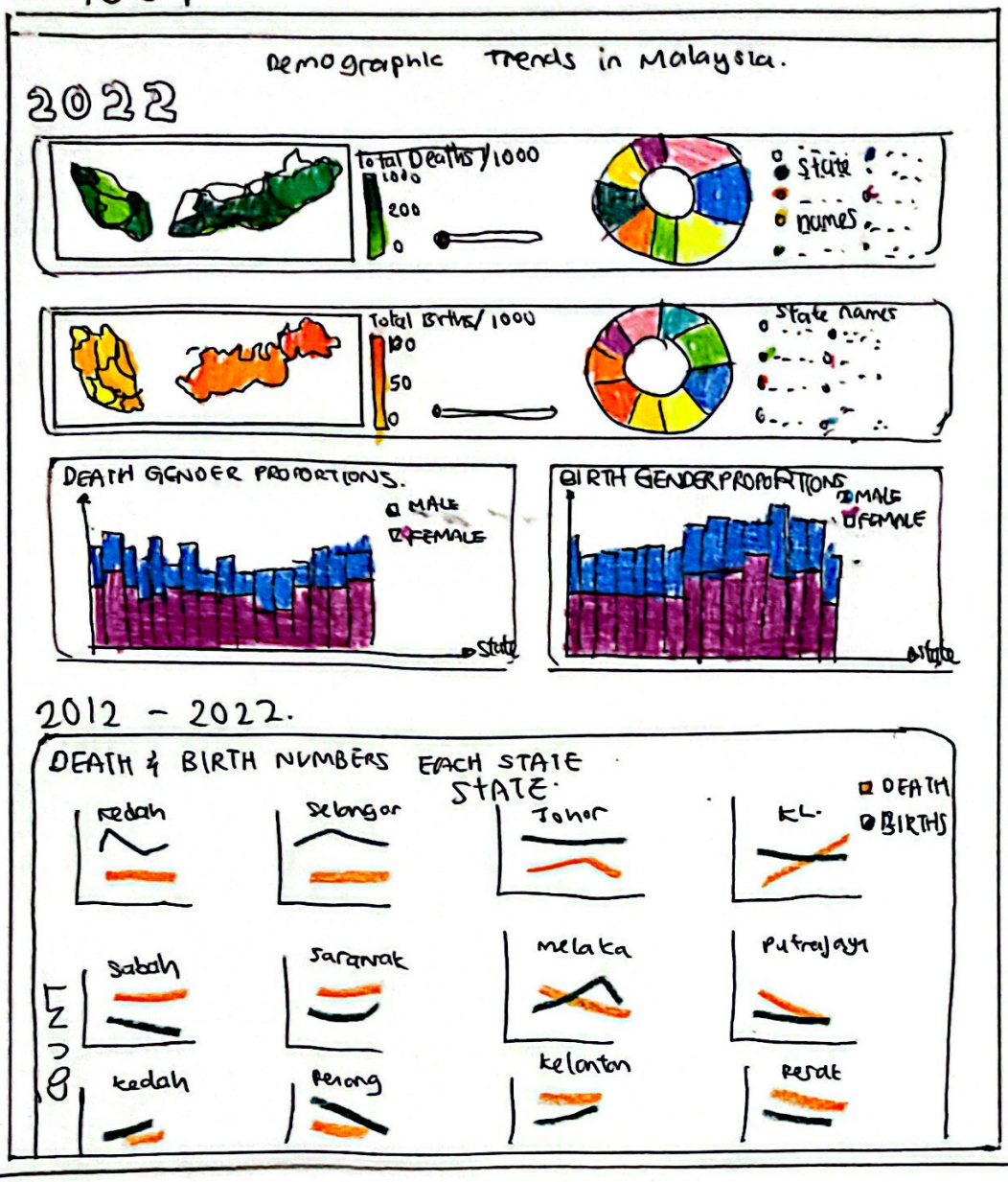
DATE : 1L
SHEET : 2.
STUDENT ID: 33203318

LAYOUT



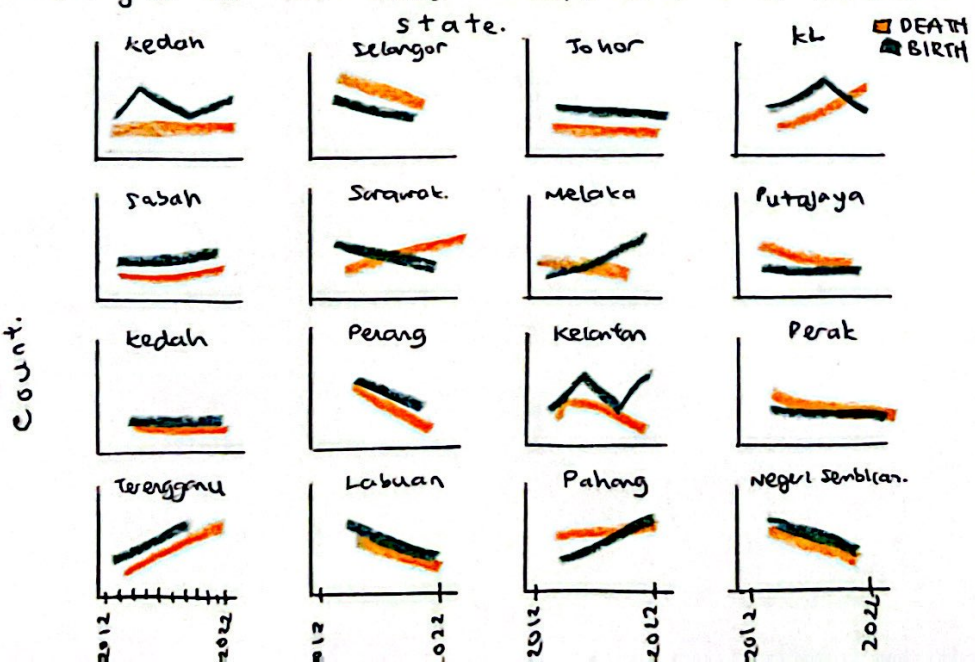
COMPONENTS / OPERATION

- containers for each plot (H, M, L).
- FILTERS (sliders) on maps.
- Hover on each segment to view tooltip informations.
- annotated maps to feature high / lowest birth & death rates.

FOCUS

① showcase all states birth & death rate over the years.

↳ small multiple method.
→ one grid for each state. → time frame to be decided.

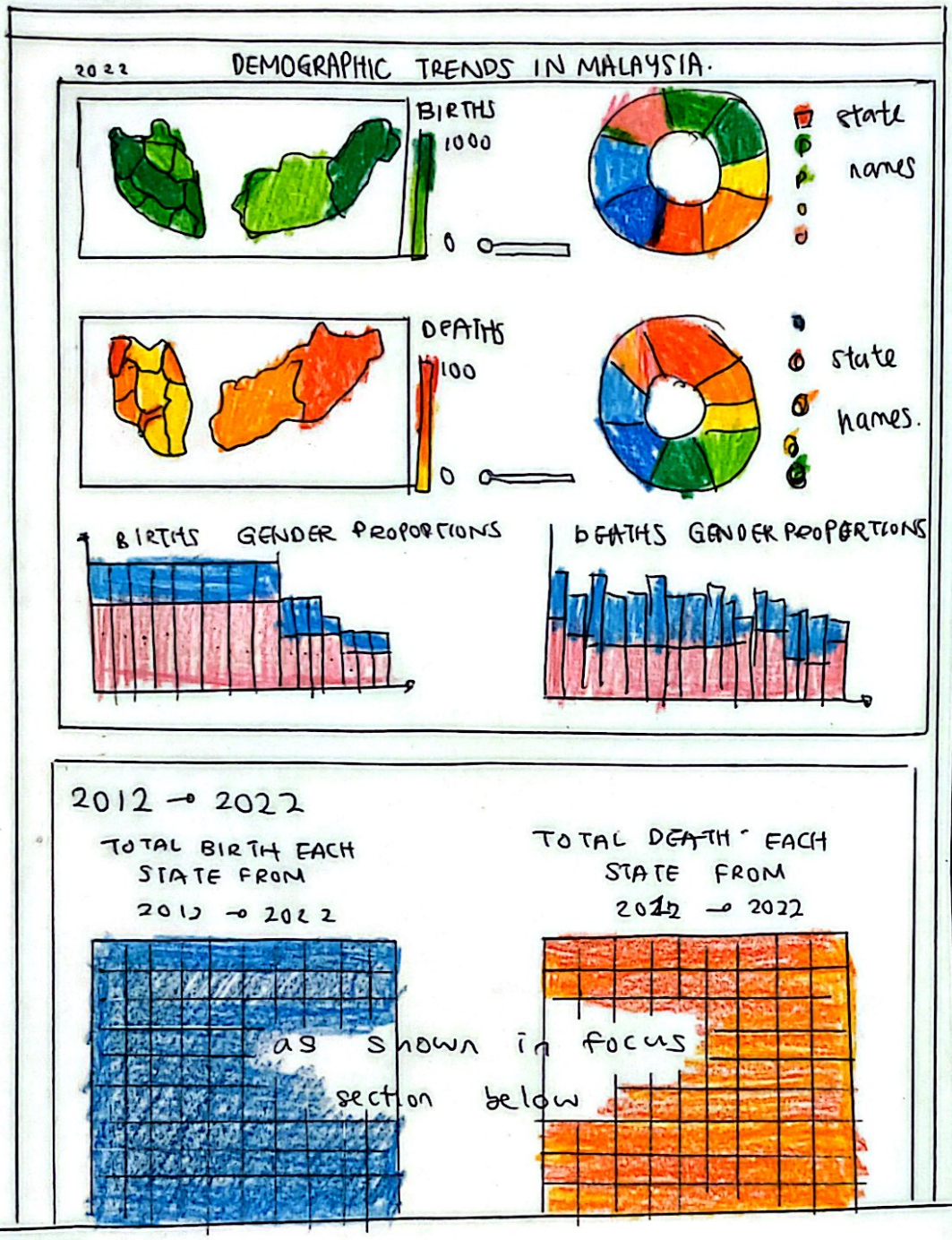


DISCUSSION.

PROS.
- able to see each state birth & death trends over the years. (upward / downwards)
- can utilize tooltips for detailed information

CONS.
- difficult to interpret without tooltip.
- axis scales only appear on left & bottom plots.

LAYOUT



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DATE
SHEET = 3
STUDENT ID = 33203318.

COMPONENTS / OPERATIONS.

- grouped by 2022 only section, and another from 2012 → 2022.
- filters for maps.
- hover on each segment to view tooltip info.
- heatmap that shows the stats of each states & within a given year period. (10 years).

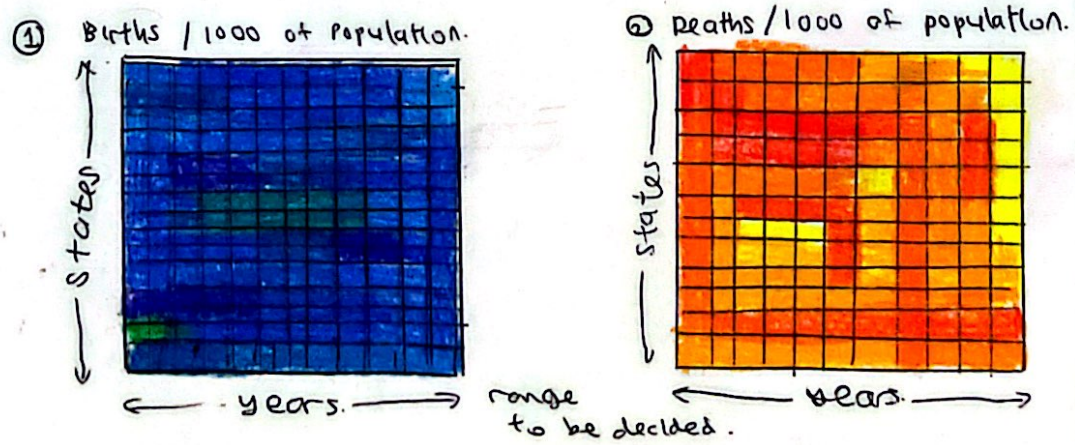
DISCUSSIONS.

PROS.
- able to visualize birth & death rates high & lows based on colour.
- each plot is ready to interpret

CONS
- unable to show trends as well as line chart.
- might be confusing to interpret.

FOCUS

- Heatmap each for birth & death
  - able to showcase high & lows of rates based on colours.



different colours to encode births & deaths (done)

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DATE:
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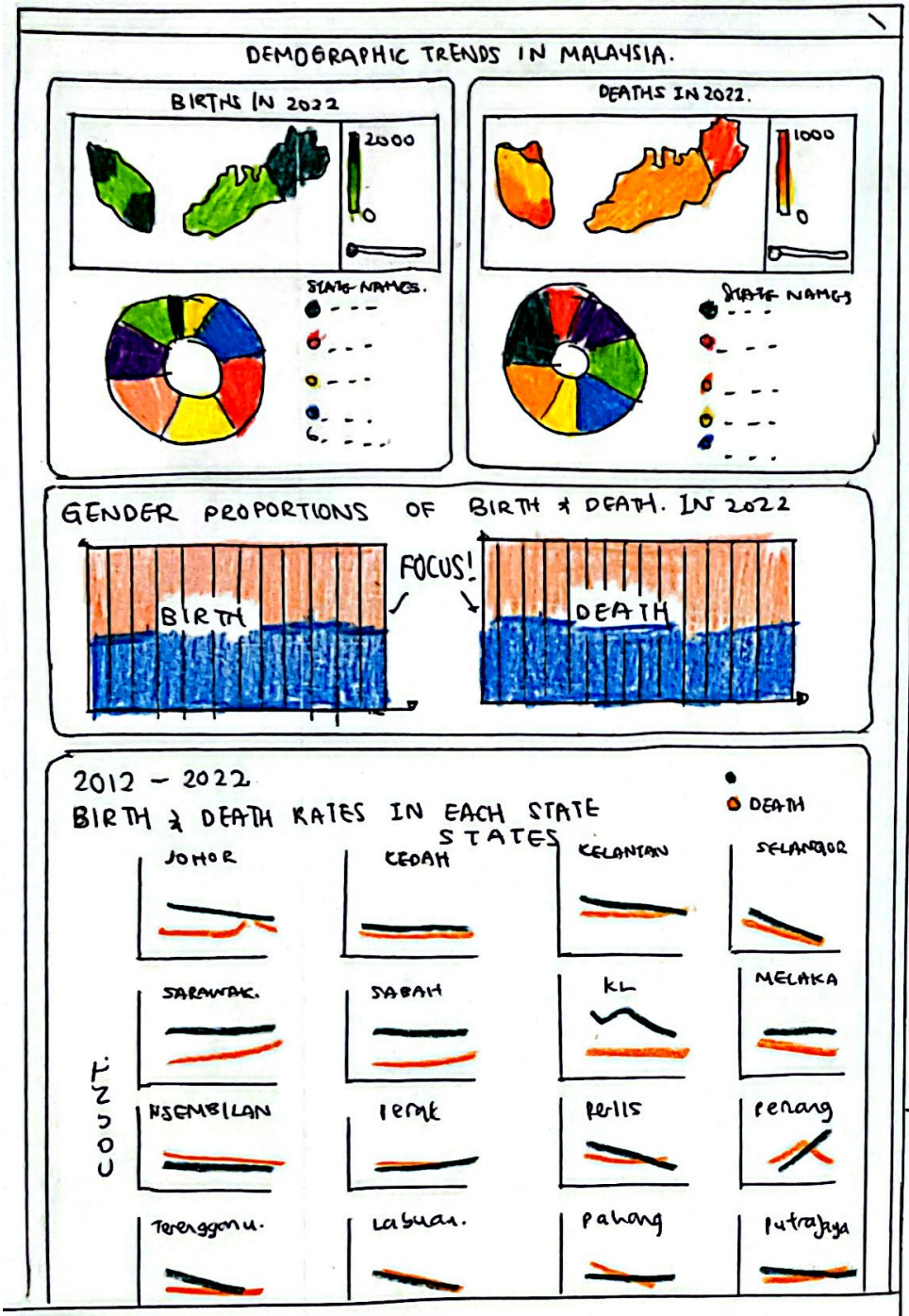
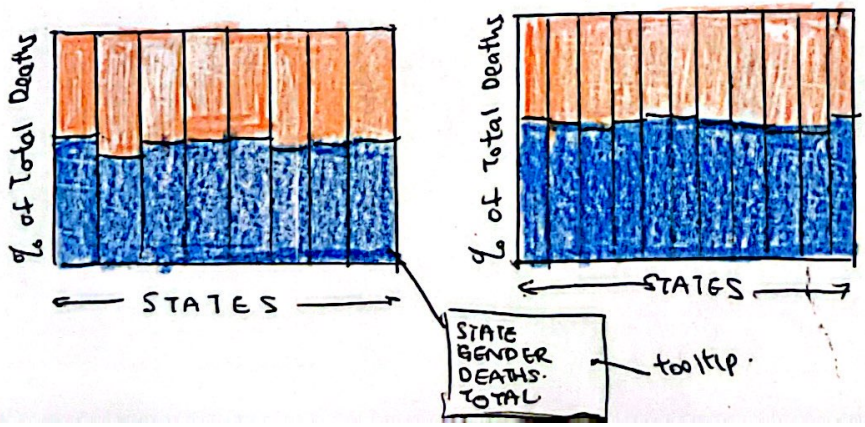
LAYOUT



FOCUS

STACKED BAR CHART.

- normalized to 100%
- each bar represent a state, and divided into gender proportions.



COMPONENTS / OPERATION

- separate containers for births & death, gender proportions in 2022, and another one for 2012-2022.
- filters (sliders) for choropleth maps.
- Hover on each segment to view tooltip informations.
- annotated maps.
- Interactive containers. (change colours !)

DISCUSSION

- PROS
  - better than using a normal bar chart, where the percentage of proportion can be seen.
  - neat & easy to interpret.

CONS

- If one column has zero values (no male/female) absence might not be seen in a stacked bar chart.
- can't visualize gender proportions over time. Can only focus on one year.

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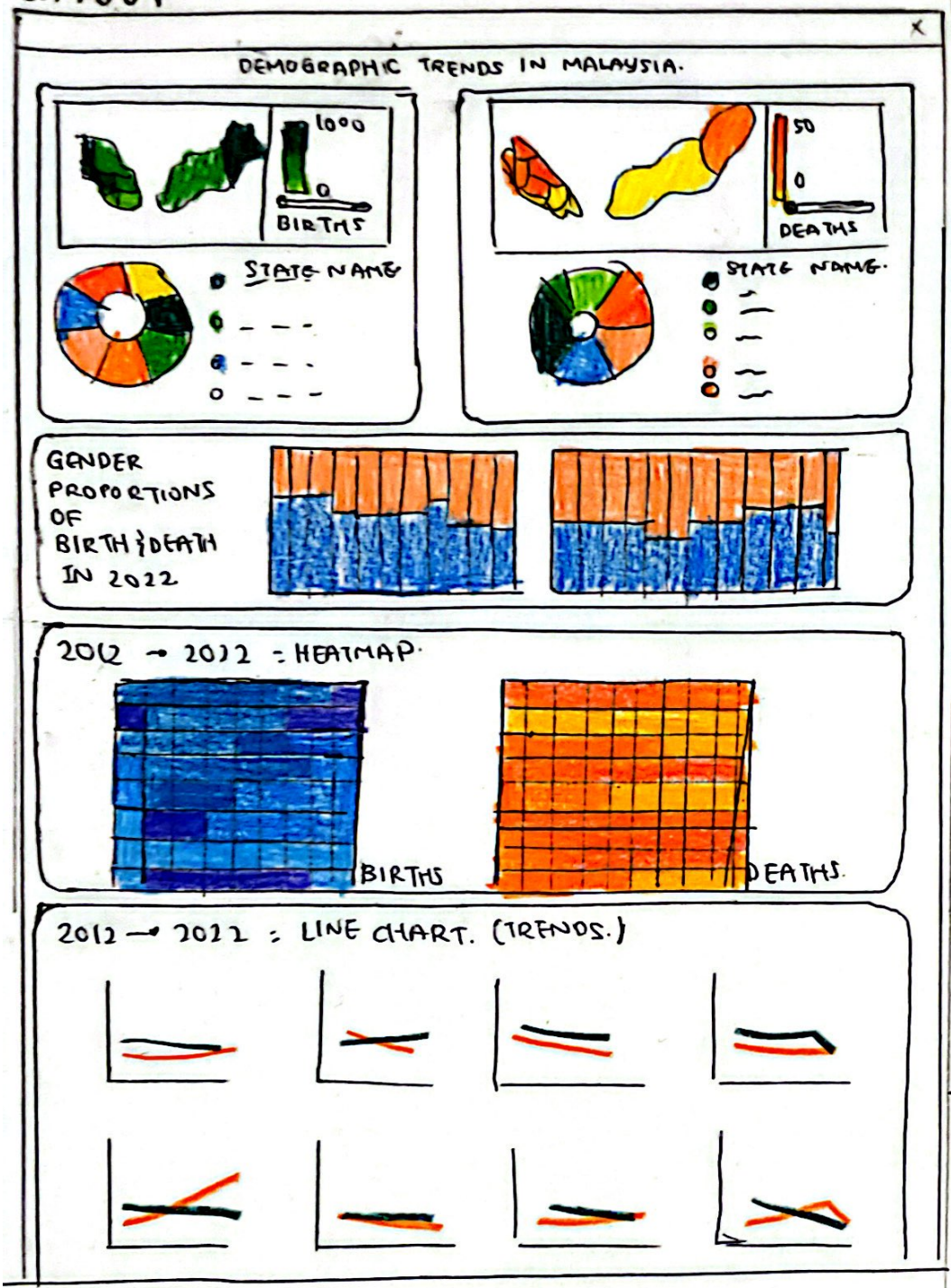
LAYOUT



COMPONENTS./OPERATION.

1. Focus on 2022 infographics in the first half.
   - births / 1000 people in the population
   - death / 1000 people in the population
   - donut chart to show percentage of births / deaths
   - gender distributions.
2. second half focuses on 2012 to 2022
   - heatmaps with states and 10 year period.
   - line charts of states in small multiples each represents death & birth rates over a 10 year period (show trends).

DETAILS.

1. CHOROPLETH MAP.
   - obtain populations and normalize for each state.
2. Donut chart
   - get percentage out of total death / birth of each state.
3. Stacked bar chart
   - select and categorize based on Male & Female.
4. HEATMAP.
   create one for birth, & one for death.
5. Line chart
   - utilize small multiples.
   - group by states.

FOCUS

1. BIRTH SECTION — FEATURES CHOROPLETH MAP OF BIRTH / DEATH per 1000 of population
2. DEATH SECTION — FEATURES DONUT CHART FOR EACH STATE CONTRIBUTION PERCENTAGE
3. GENDER PROPORTION — STACKED BAR CHART.
4. 2012 → 2022 HEATMAP — BOTH required. these line chart can
5. 2012 → 2022 LINE CHART — SHOWCASE TRENDS.
   - especially with small multiples.