① IDEAS

World Map
• Choropleth
→ proven oil reserve

proportional symbol map of biggest reserved countries. Size channel

Vene
Saudi
Canada
Iran

→ horizontal bar chart

→ world map proportional symbol chart

Biggest Oil & gas companies

petroleum consumption

line chart
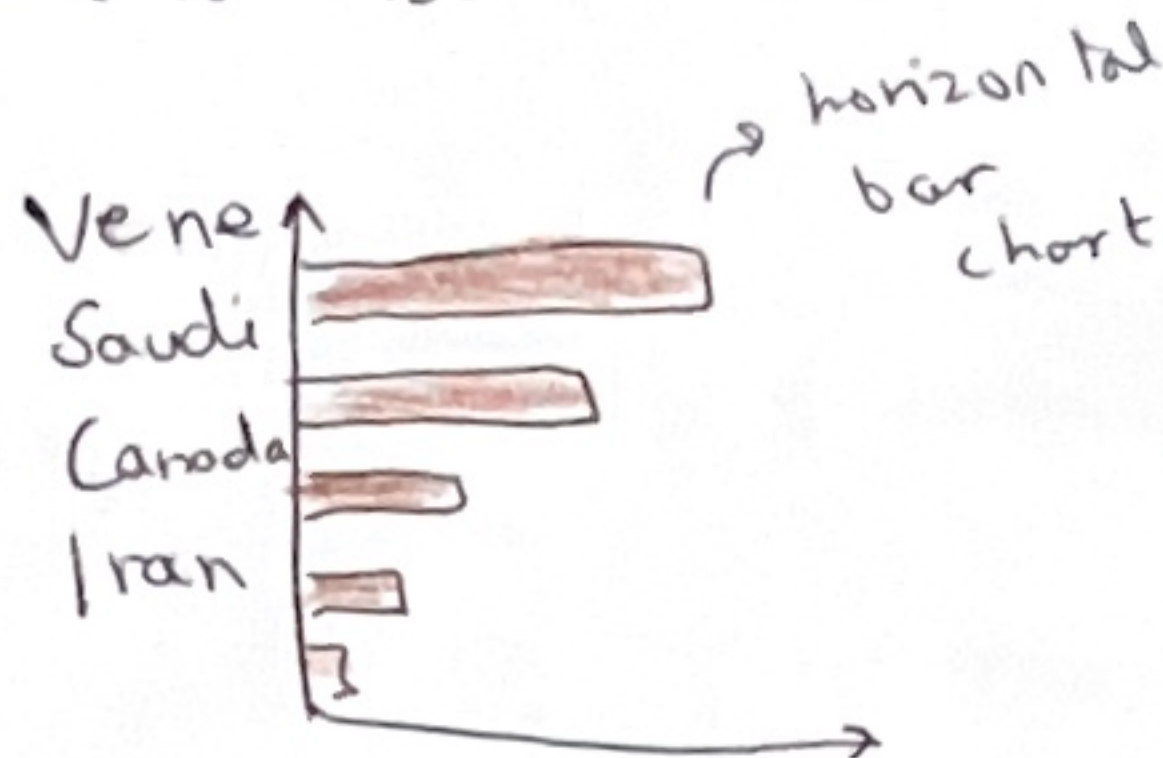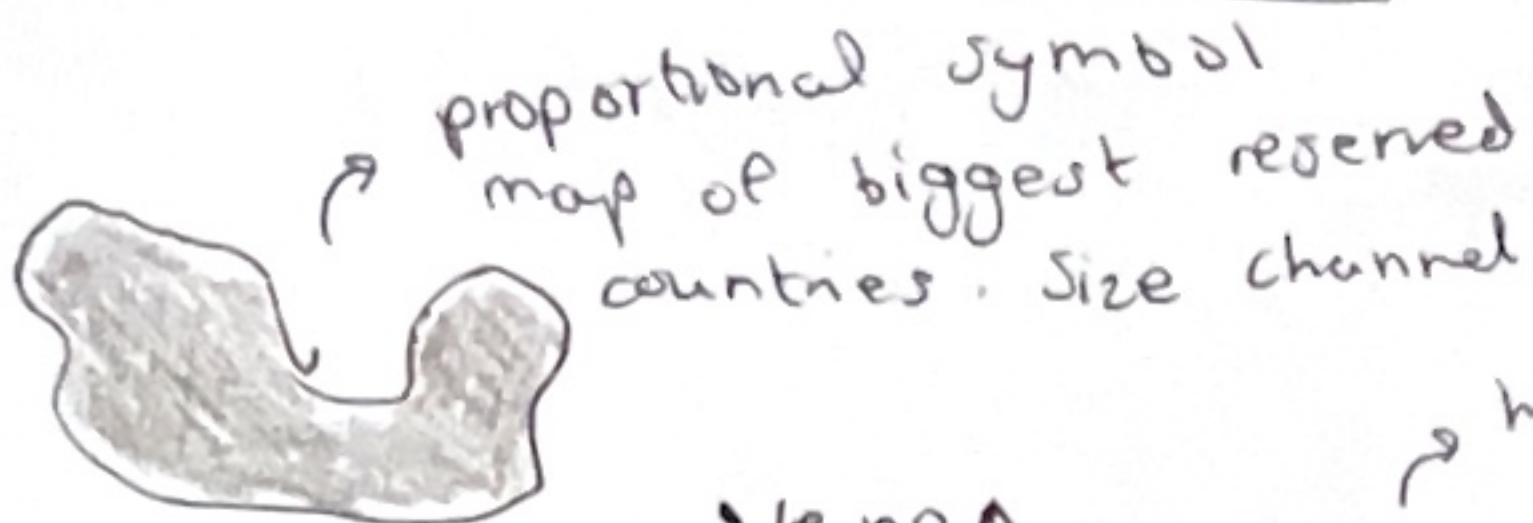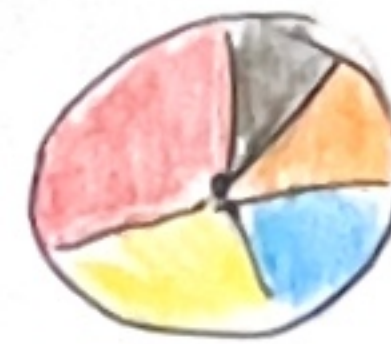
② FILTER

Oil reserve
• World map
• Choropleth

✗ no need for proportional symbol chart;

Pie chart of biggest oil & gas companies

• line chart of petroleum consumption

33% oil   30% coal   20% gas

③. CATEGORIZE

• Choropleth & proportional symbol chart combined

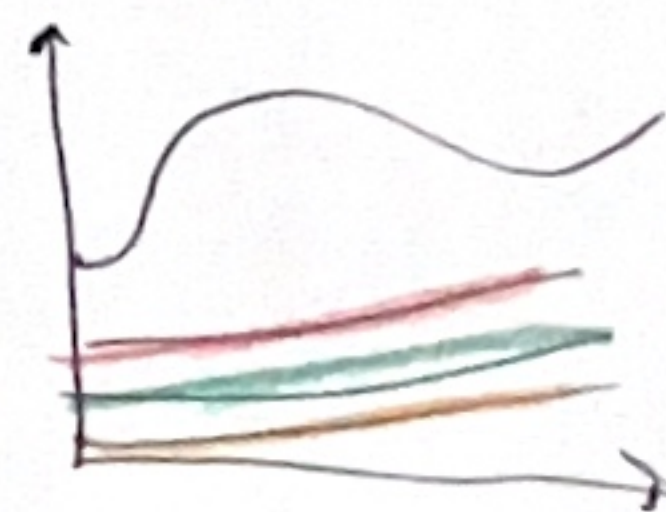+ line chart to show consumption } Worldly data
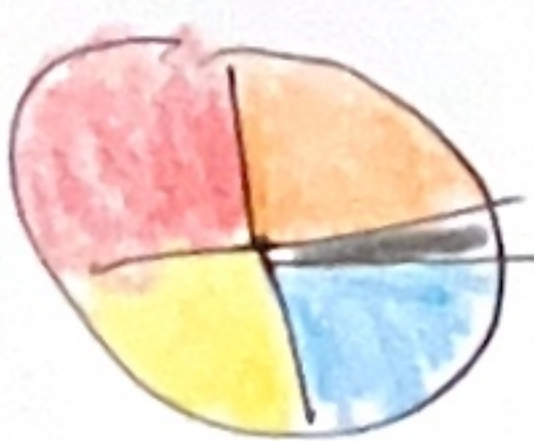
+ natural resources consumption

④ COMBINE & REFINE

Worldly data
① → all describes world data

② company data
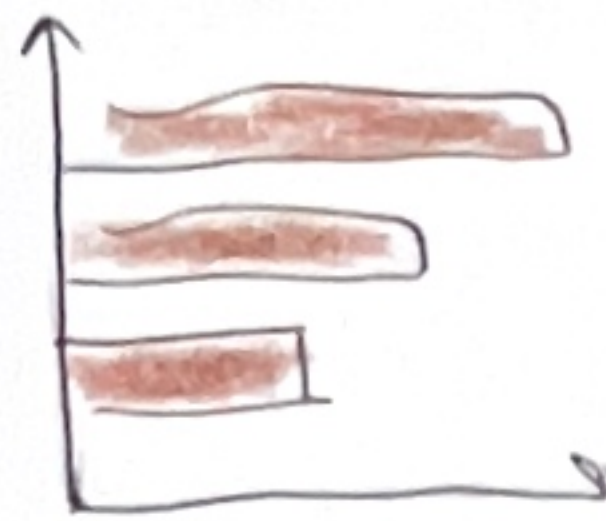
③ Top 3—5 countries with oil reserves

⑤ Questions

• Does this visualisation help readers identify countries important to oil and gas?
• Do readers understand "crude oil" aka. contextual information?

Layout

proven oil reserve
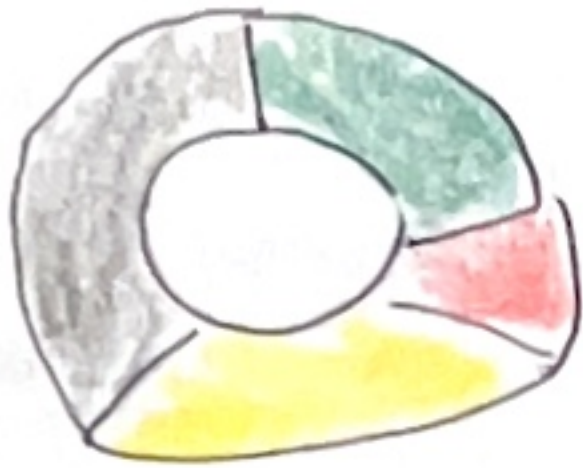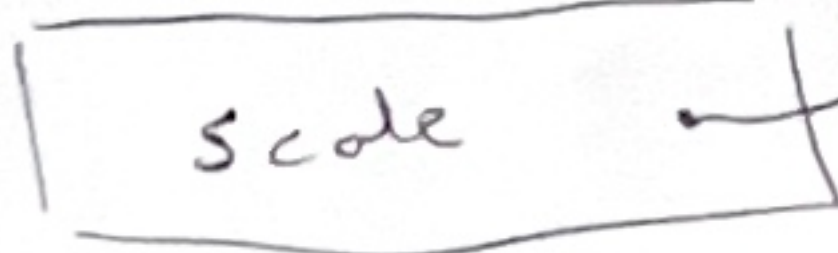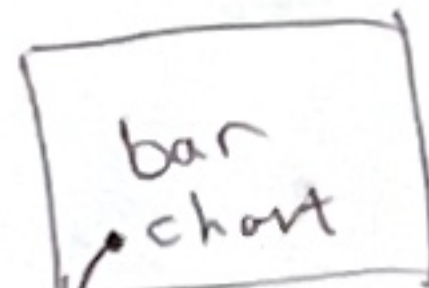
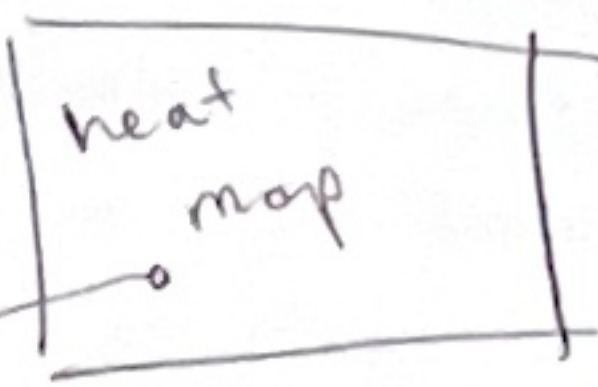

top 3

Share of Energy   Energy consumption

33%   30%

profit by company

Exxon   Shell   (heat map)

Market Share of
Oil & gas companies

Focus

Choropleth chart

bar chart

scale

these shows the worldly data introduce the topic domain well.

donut chart   heat map

these shows the company that can control the energy industry. (influence)

Operations

Choropleth

tool tip shows country name

tooltip shows info

tooltip shows data

scale

company name & country of origin

· company name
· profit data
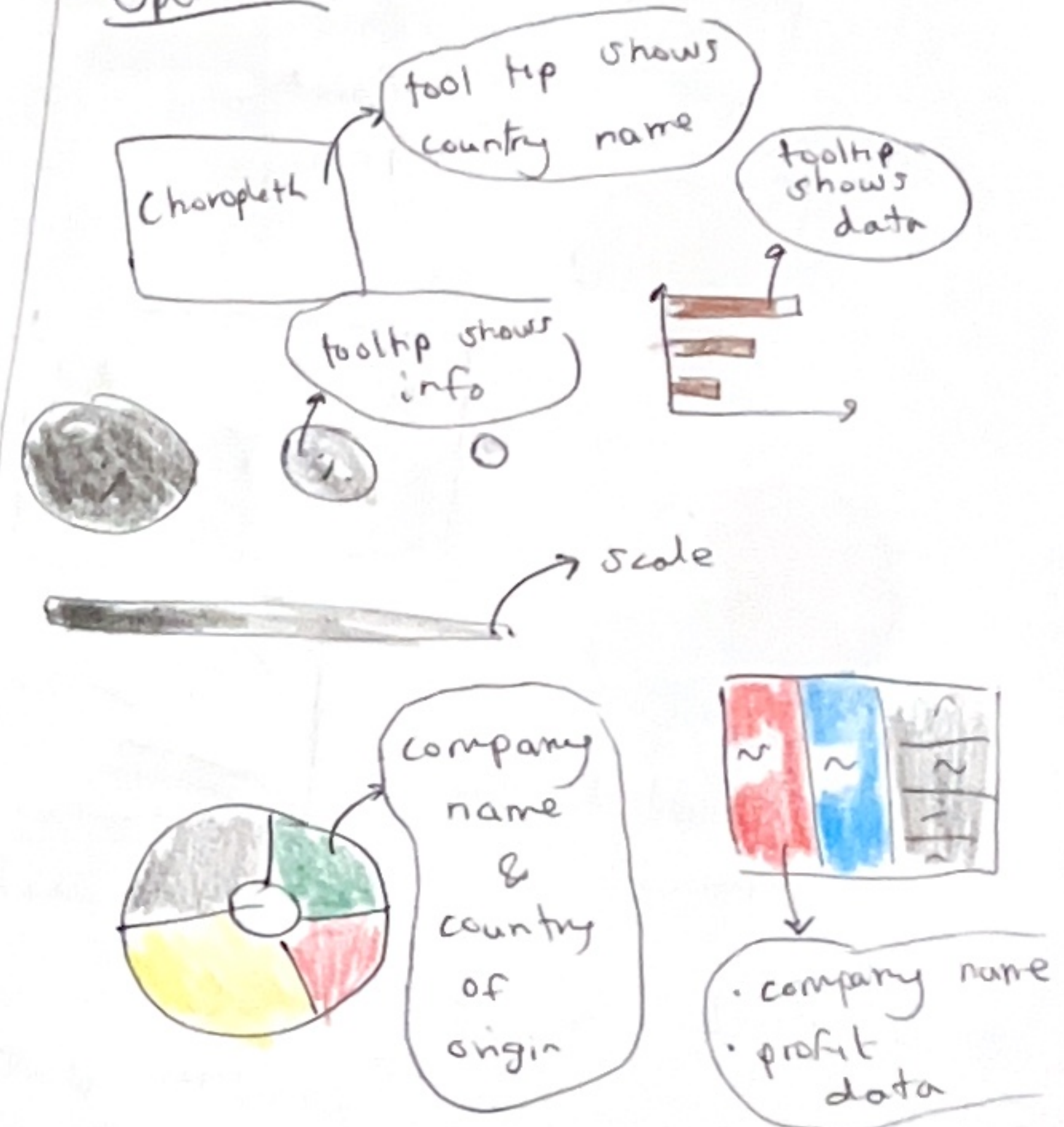
Discussions

· Do readers need to know more information?

· Is there a transition between world data to company?

· Should scale consumption come first?

layout

Oil reserve top 3

Oil consumption

explanation ~

choropleth of countries & oil reserve
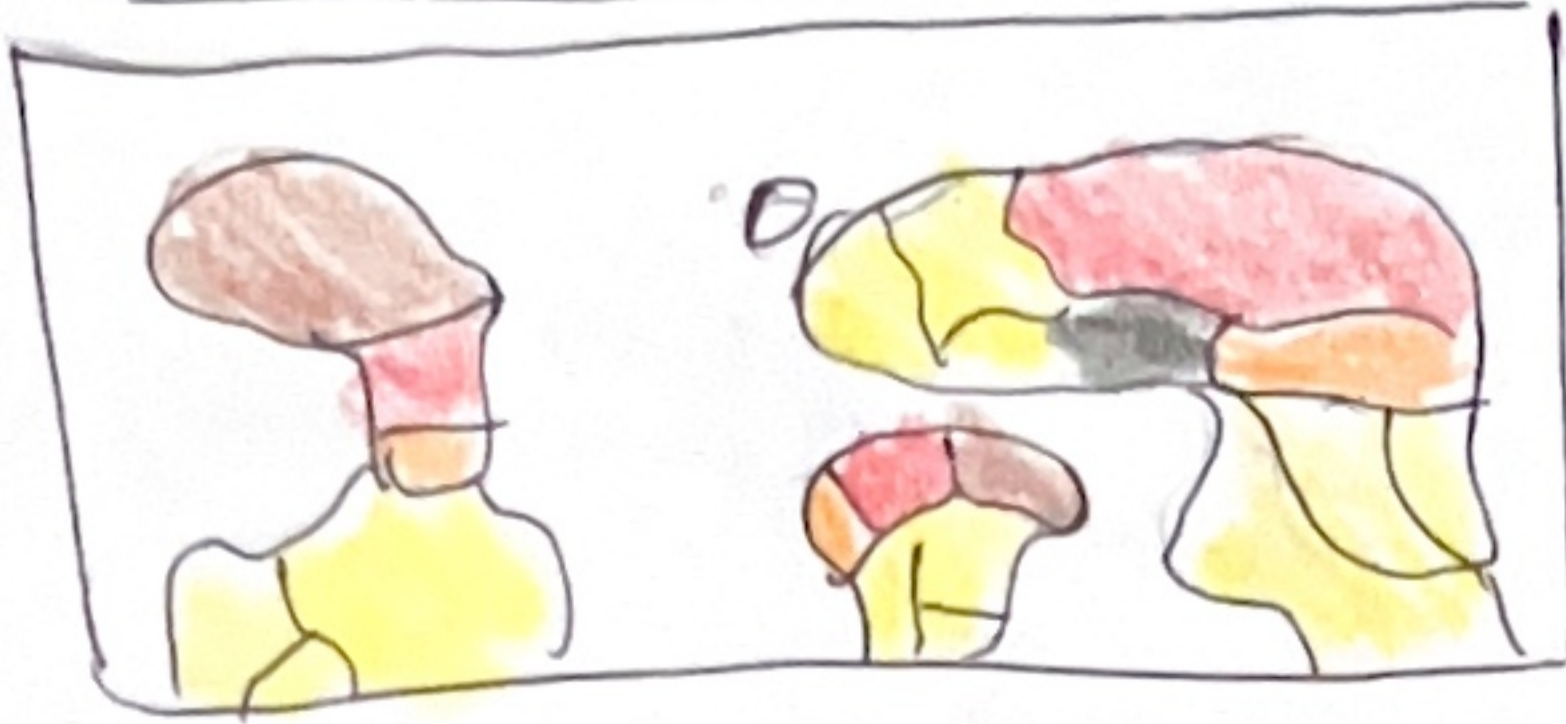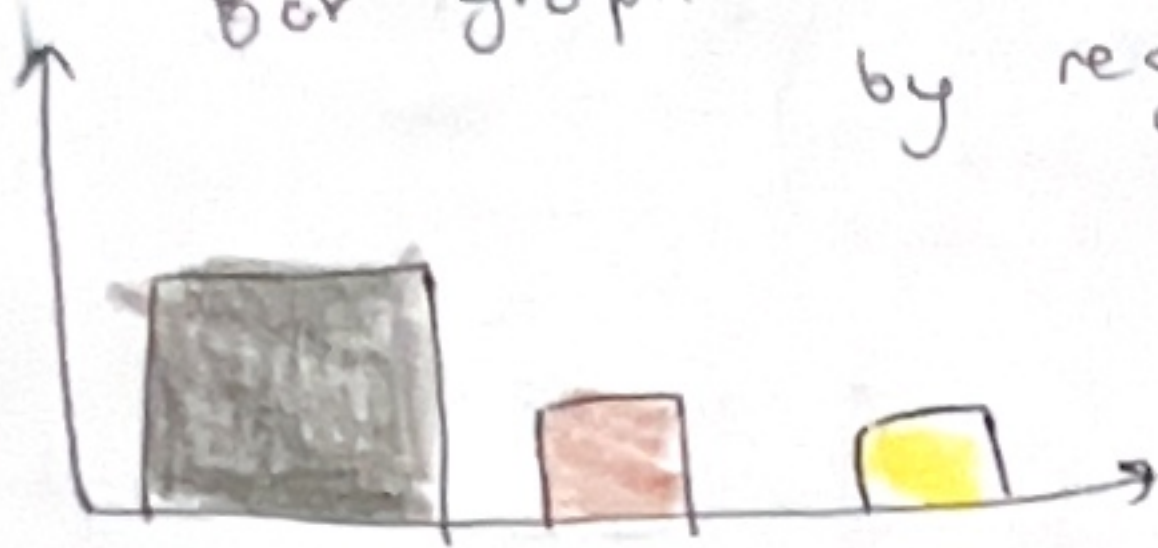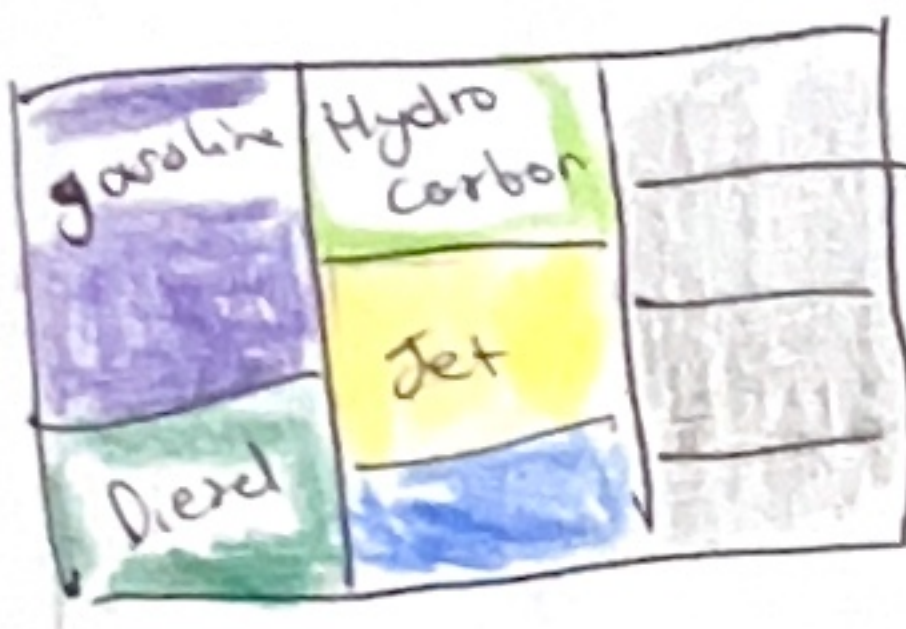
Bar graph — oil reserve by region

oil prices

gasoline | Hydro carbon

Jet

Diesel

products from crude oil

Operations

- **Bar graph** → tooltip → Info of the country e.g., GDP, population

- **Choropleth** → tooltip → country data
  → GDP
  → population
  → GDP/capita

- **bar graph** → Include largest countries
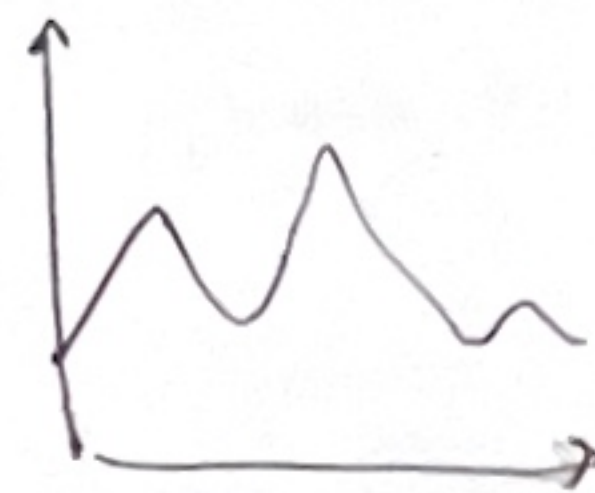
Focus

Bar chart ↘ highlights the biggest countries

multi-line chart ⎫ introduce the domain & its importance

Choropleth chart → displays the data of each country

Follows the same scale

Bar Chart → summarises the data

Heat map → extra contextual information

line chart → additional information
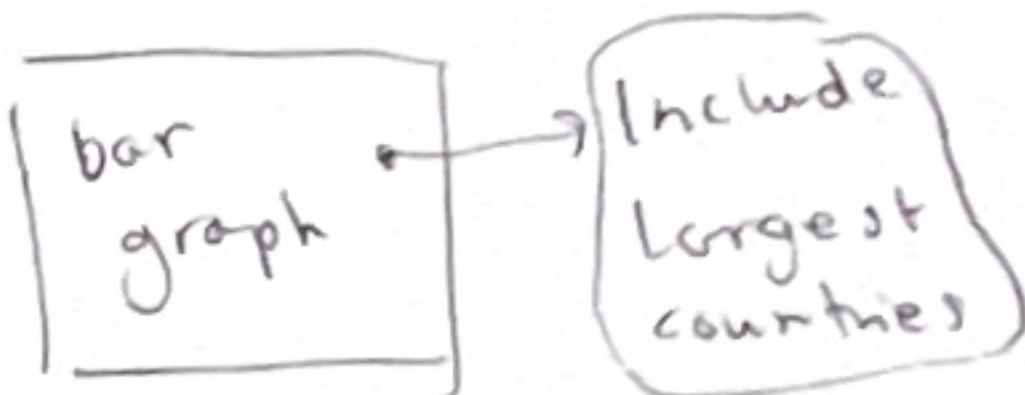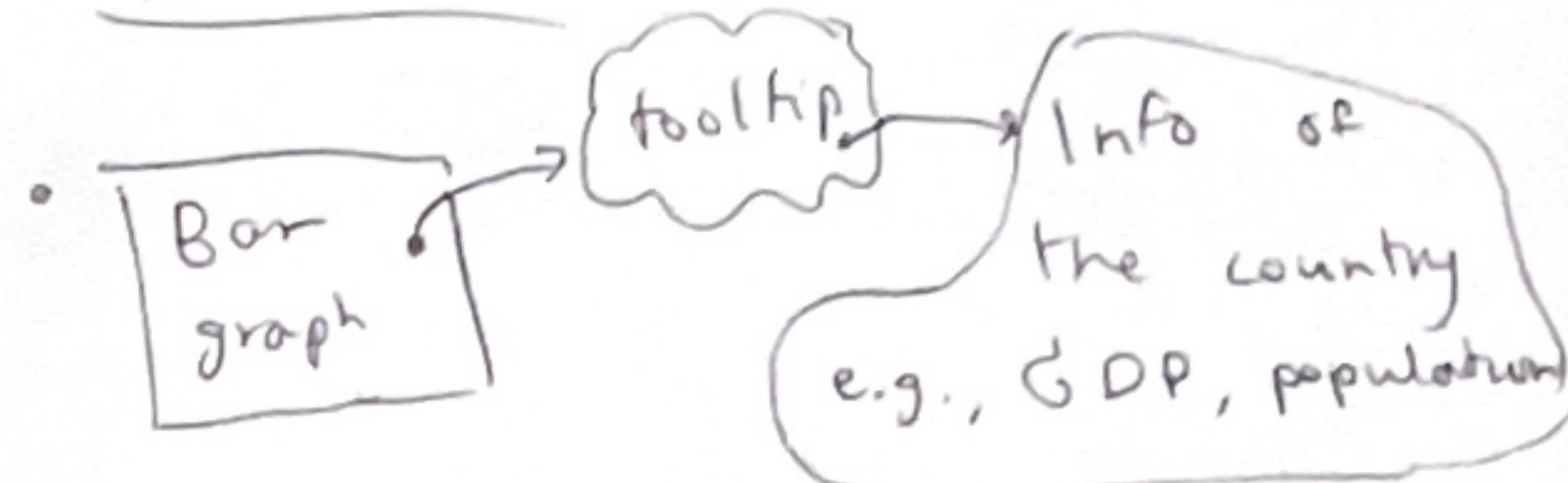
Discussion

- Removing the company section, ~ does it have any impact on the why? of the domain?

- Are the additional information needed?

- Too much clutter?

③

Layout

① Choropleth

② • Biggest oil companies

③ oil prices vs. demand

④ • Top 3 largest oil reserve

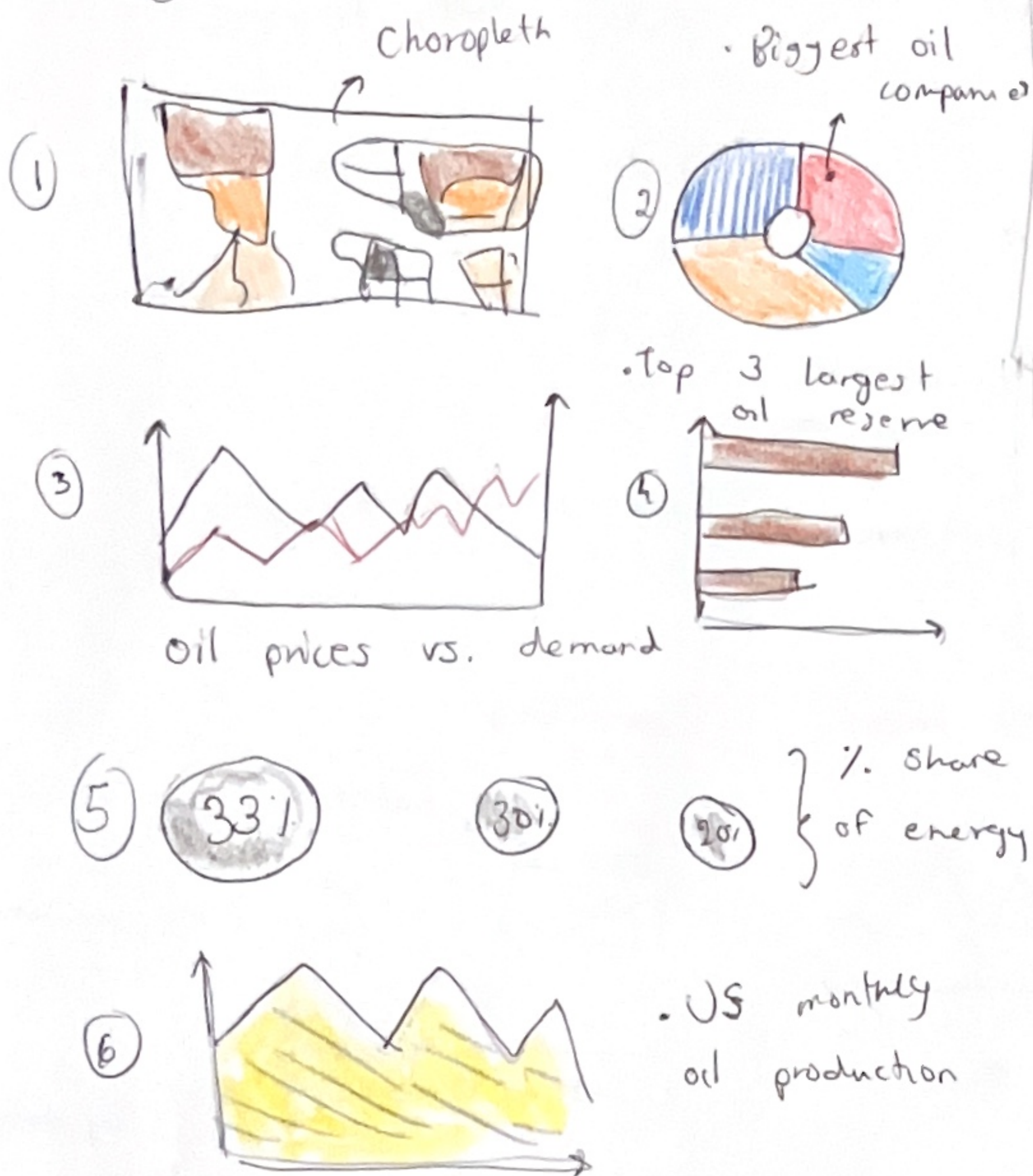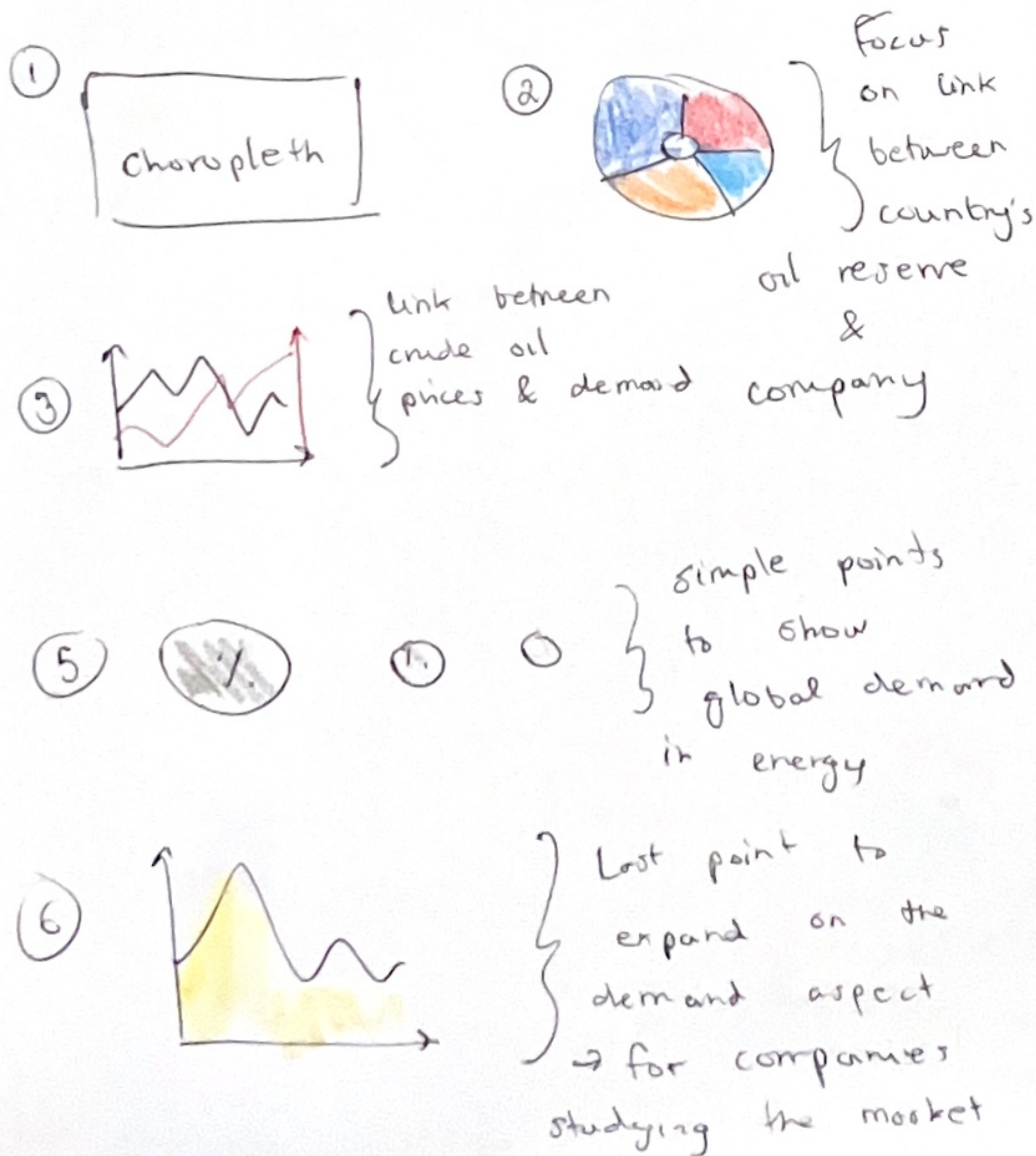⑤ 33%   30%   20% } % share of energy

⑥   • US monthly oil production

Operations

Choropleth → Tooltip Country data

tooltip → country based in ← O

 → tooltip show both data

 → tooltip data

Focus

① Choropleth

link between crude oil prices & demand

② Focus on link between country's oil reserve & company

③

⑤ ○ ○ ○ } simple points to show global demand in energy

⑥ } Last point to expand on the demand aspect → for companies studying the market
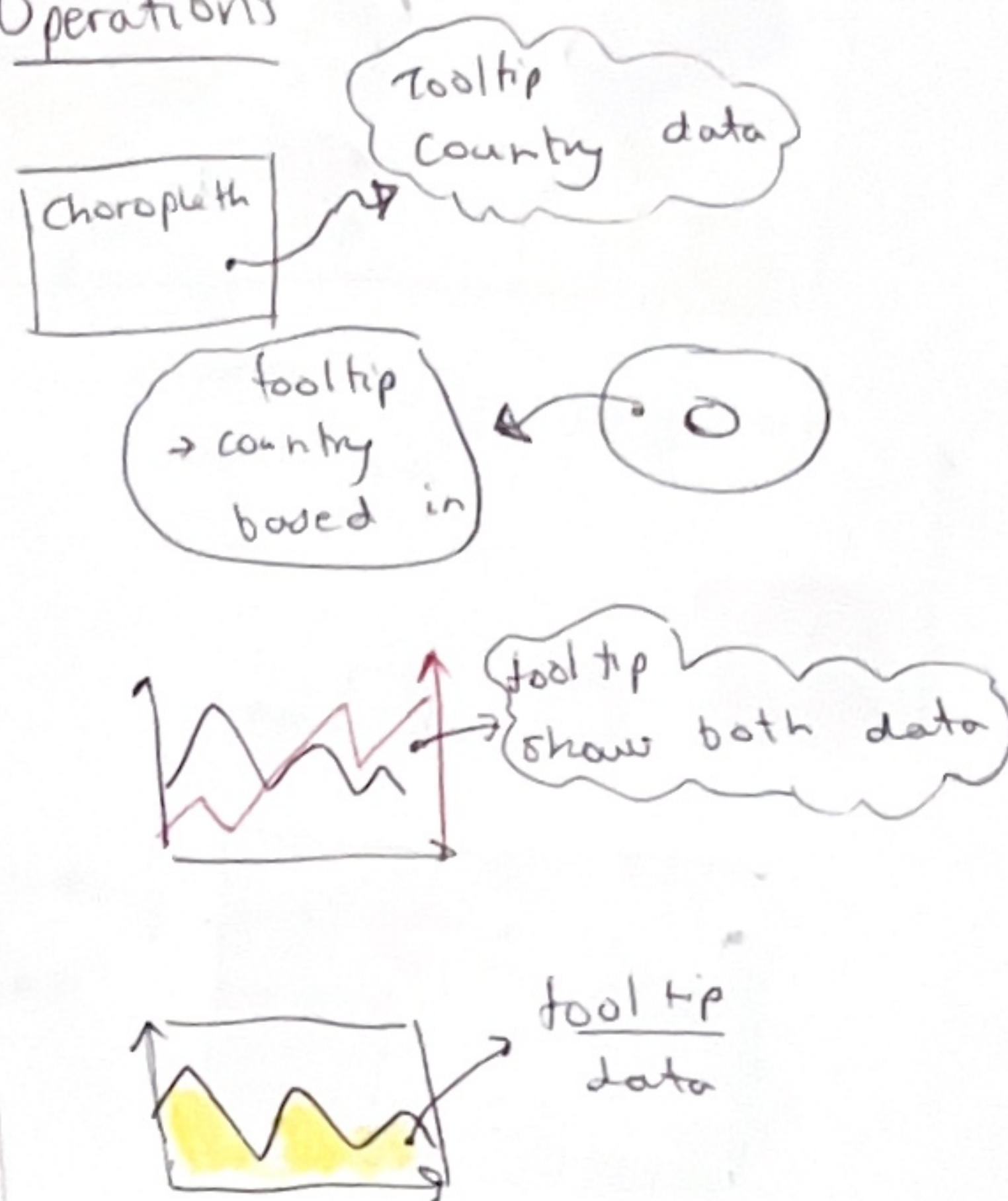
Discussions

• Are visualisations the simplest way to represent these data?

• What are annotations required in the charts?

• How do readers know what oil is used for?

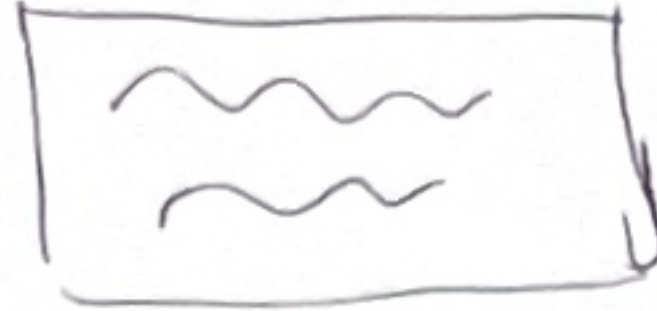• Visualisation has a good story flow.

④

Layout

World Oil Reserve

①

Info sheet

②

- Top 3 largest oil reserves
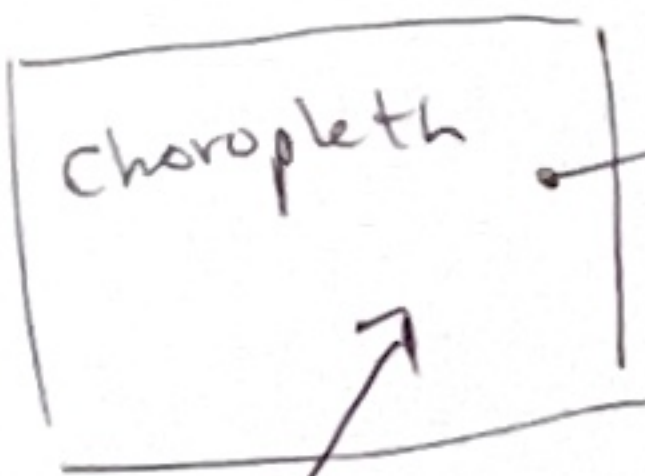
③

Biggest Oil company + Country Flag ~~logo~~

④

- Petroleum demand from countries

Focus

① Choropleth → Displays geographic data ↗ main focus of visualisation

②

③ World data

→ provides readers with geographic knowledge with data

④ → line chart to show demand

Operation
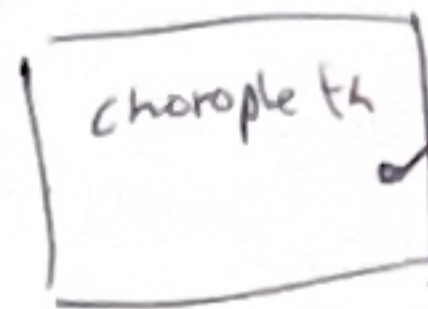
① choropleth → tooltip → country's data

② → has Flags as y-axis

③ → tooltip → show country of origin

④ → tooltip → identify country

Detail

- Time to collect & clean data: 3 days

- Time to build code: 4 days

- Data uses csv files

- Choose color via colour blind palate.

- Follow similar layout, color, typography as Asg 1.