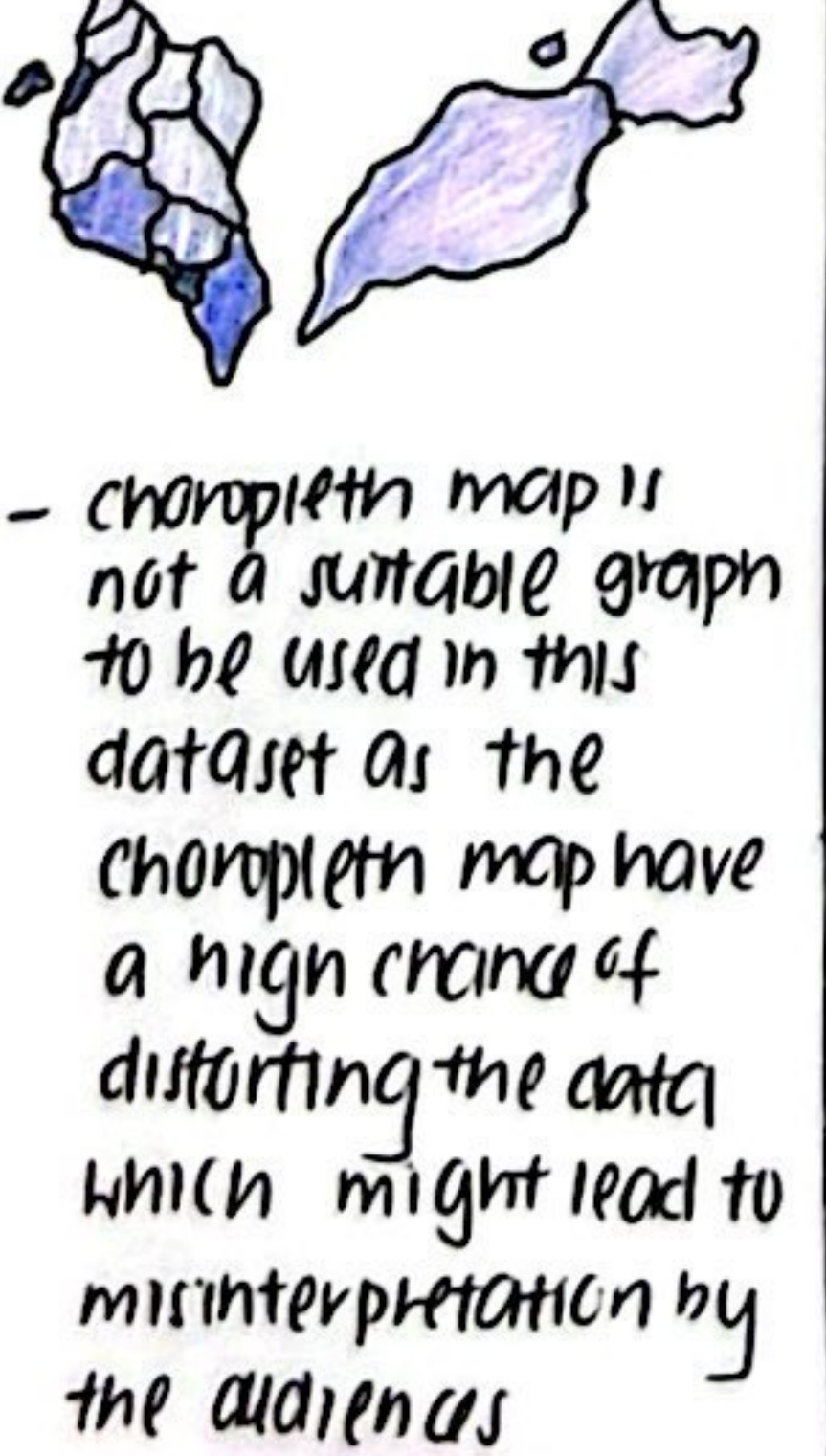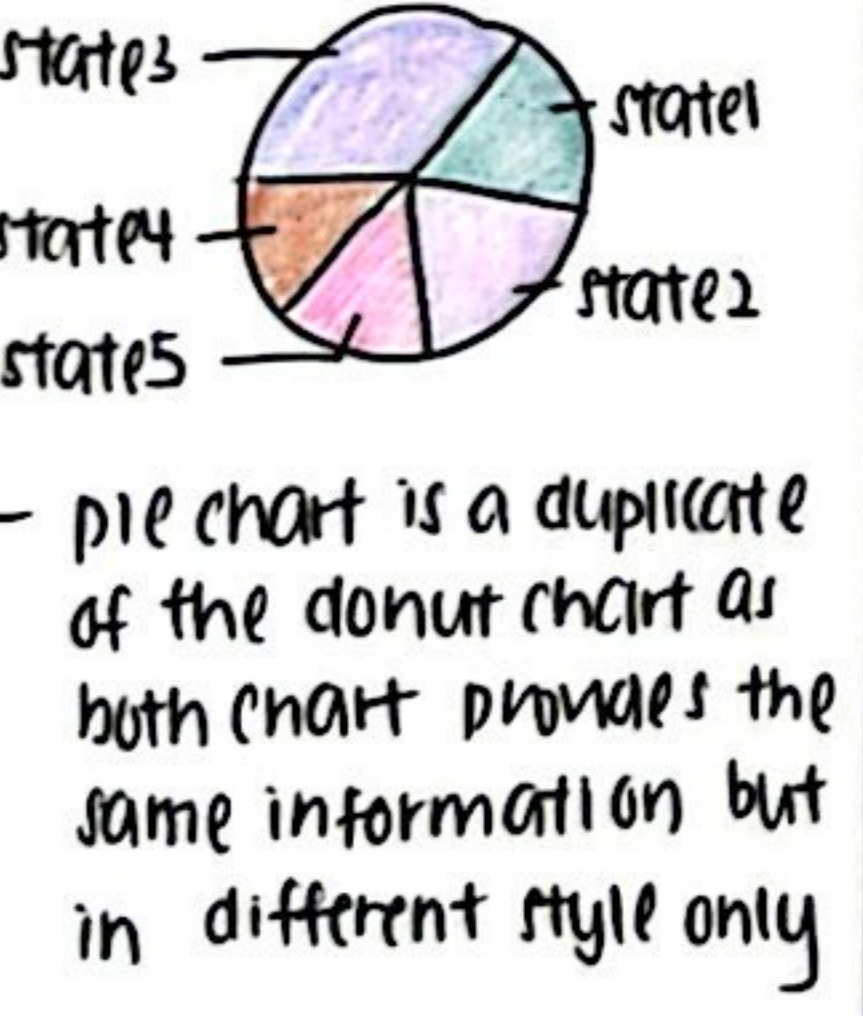Title: Tourism Insights in malaysia
Author: Foo kai Yan
Date: 12/10/2024
sheet: 1   unit: FIT317

IDEAS

FILTER

- stacked area chart might not be suitable for this dataset as it is difficult to interpret

- pie chart is a duplicate of the donut chart as both chart provides the same information but in different style only

- choropleth map is not a suitable graph to be used in this dataset as the choropleth map have a high chance of distorting the data which might lead to misinterpretation by the audiences

CATEGORIZE

state popularity and international arrivals in malaysia → Gender Breakdown and state Preferences → statewise analysis by year and month

- bubble chart
- Stacked bar chart
- multiline chart
- heatmap
- Flow map
- proportional symbol map
- donut chart
- bar chart
- bump chart
- scatterplot

COMBINE & REFINE

- combine bar chart, stacked bar chart to another version of stacked bar chart that includes the distribution of gender for tourist arrivals
- shows gender breakdown and state preferences of tourist

- combine scatterplot and bubble chart
- one bubble represents one state and size by quantity of arrivals
- can filter by year to get the data shown by month of the chosen year

DISCUSSION

- can the graphs be implemented in vegalite?
- can the graphs be successfully implemented due to time constraints?
- should the graphs involved in time show the time monthly, daily, or yearly to convey the message better?
- are the graphs too simple?
- are the graphs chosen appropriate?
- how will the dashboard help or benefit hotels, accommodation, ministry of immigration, tourism industry and tourism companies in malaysia?
- will the dashboard be unique and not similar to the other dashboards designed by the people with the same datasets?
- should the proportional symbol chart have double encoding?
- is the dashboard too clustered?

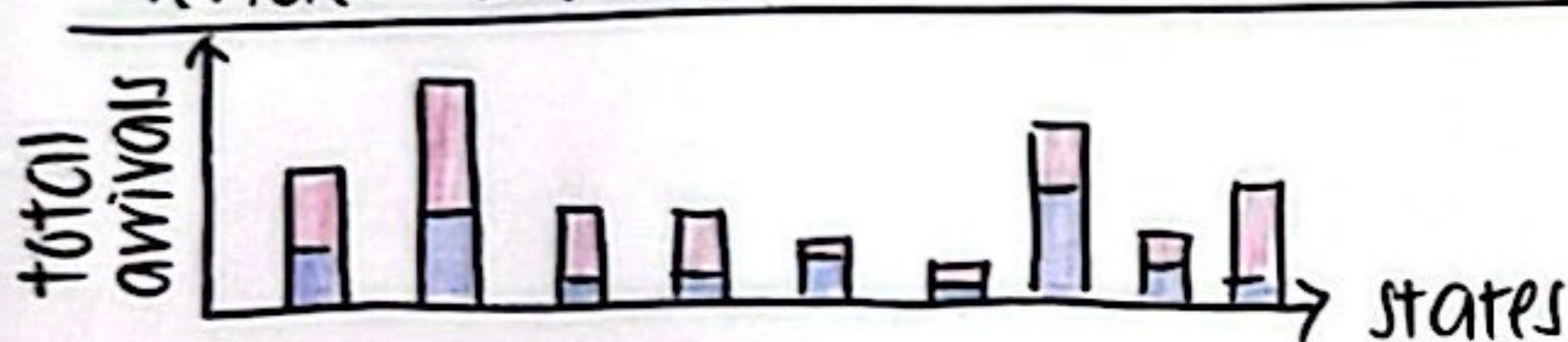# LAYOUT

Tourism Insights: Foreign Arrivals in Malaysia

State Popularity and International Arrivals in Malaysia
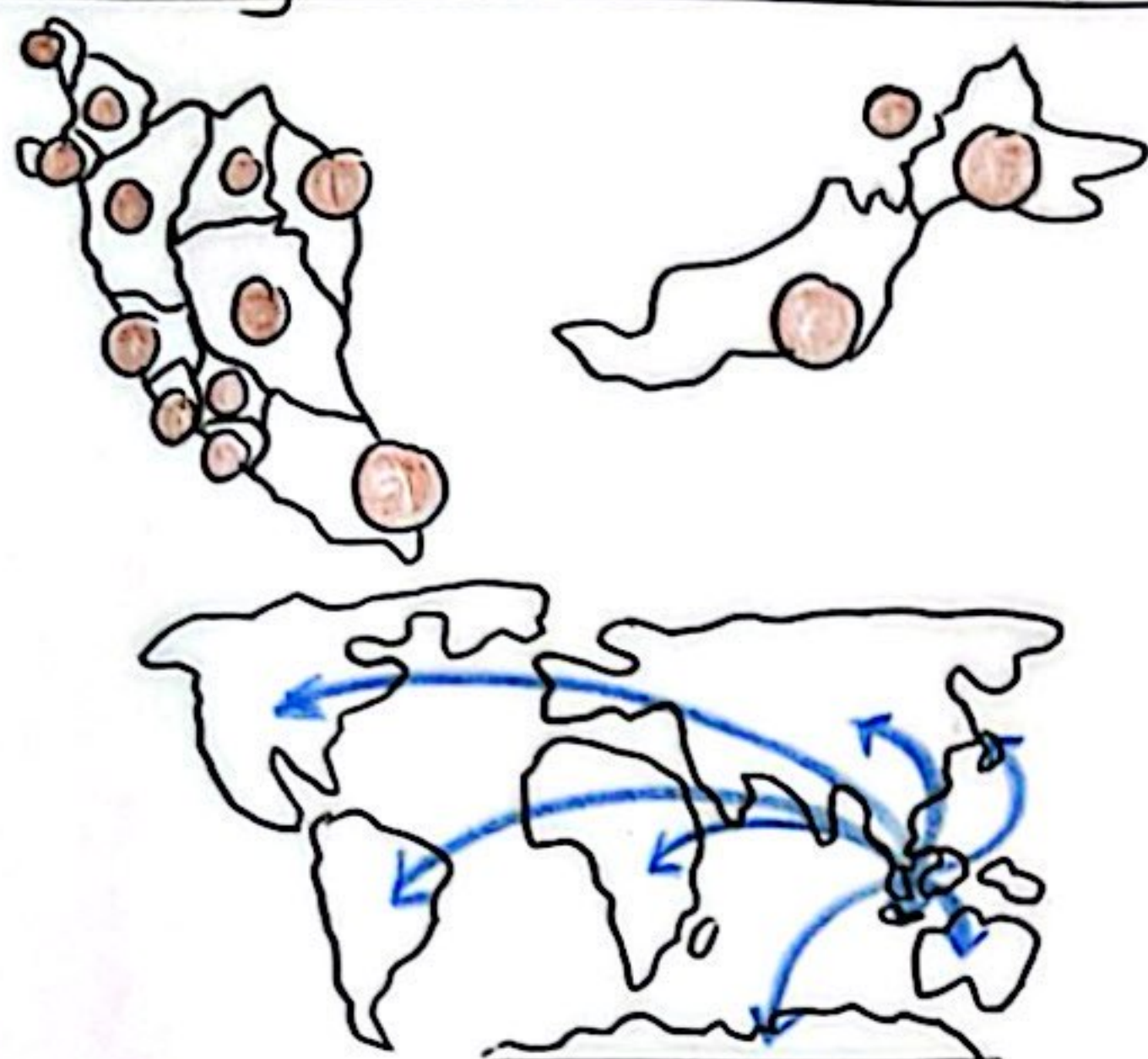
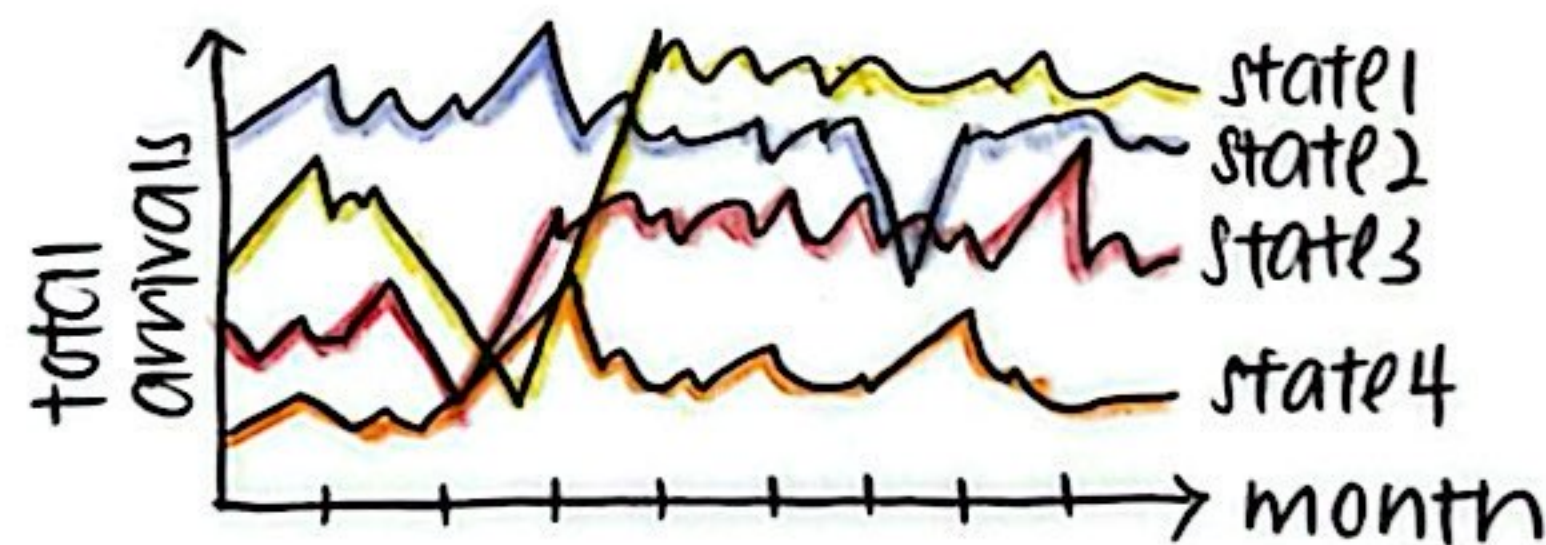

conclusive chart descriptions

Gender Breakdown and state preferences

- Johor
- Selangor
- Kedah
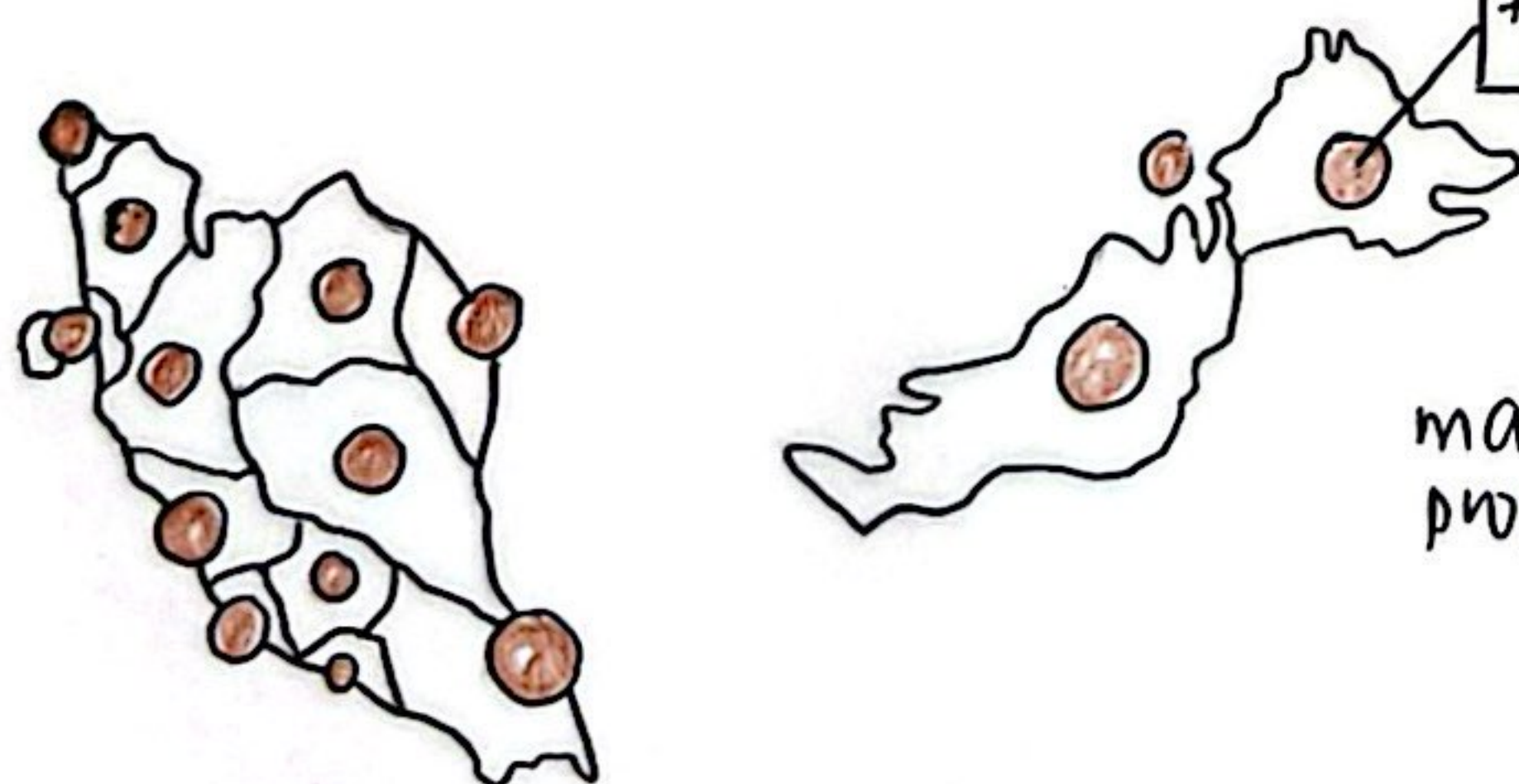- Sarawak
- Penang

Statewise analysis by month and year

state1
state2
state3
state4

FOCUS

state : Sabah
arrival : ——
female : ——
male : ——

map idiom:
proportional symbol map

- size of circle/ bubble on the map of malaysia will change based on the number of total tourist arrivals into the states
- no double encoding due to redundantcy hence all colour hue of the circular symbol will be the same but size will differ
- obtain information / insights: number of total arrivals by malaysian states

OPERATION

- allow mouse icon to hover over each circle/ bubble to obtain information from the tooltip displayed on screen
- information displayed
  - malaysian state
  - total arrivals count
  - total arrivals count by gender

DISCUSS

pros (advantage) :
- different bubbles/ circles will display different information on tourist arrivals when tooltip shows
- without tooltip, users can also gauge the proportion of tourist arrivals by the size of the bubble/circle on the map
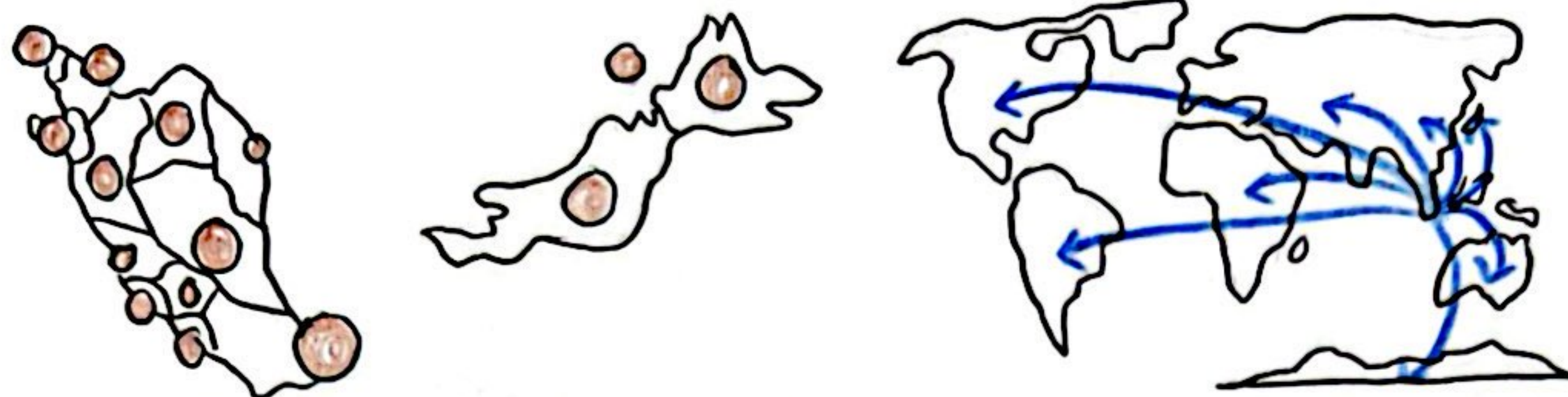
cons (disadvantage) :
- sizes of the bubbles/ circle might not easily differentiate the proportion of tourist arrivals if the class levels of the size is not very different
- attention would need to be paid to the overall dashboard sightlines and whitelines or will be messy layout
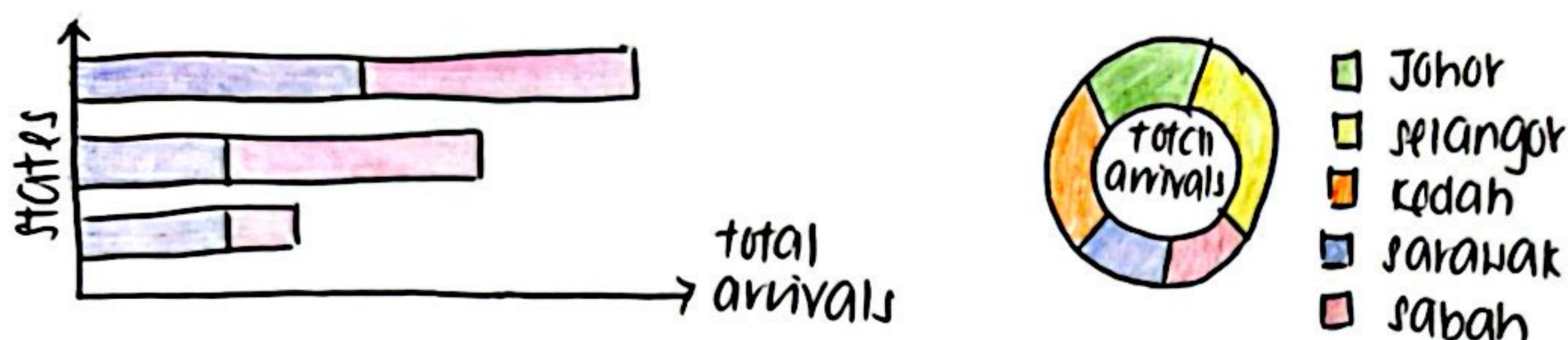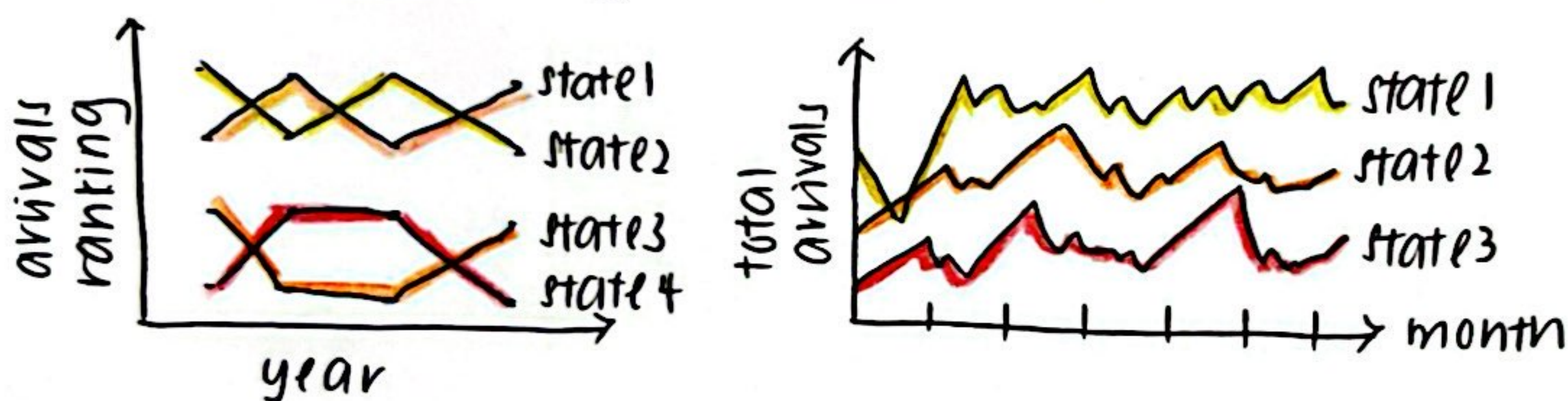
LAYOUT

Tourism Insights = Foreign Arrivals in malaysia

State popularity and International Arrivals in malaysia

Gender Breakdown and state Preferences

- Johor
- selangor
- kedah
- sarawak
- sabah

Statewise Analysis by month and year

FOCUS

select state:
[state 2 ▽]

total arrivals in state 2 is xxx

state: state 5
arrivals: xx
female: xx
arrival male: x

map idiom: stacked bar chart

- length of bars varies due to the amount of total arrivals
- tooltips contains information on state name, total arrivals, and total arrivals by gender
- once state is selected in drop down box, show annotation on the total arrivals of selected state at the end of the bar

OPERATION

- drop down menu to select focus state for the stacked bar chart
  - If the state is selected then there will be annotations appearing at the end of the bar

- users' curser if hover over the bars of the stacked barchart will show tool tip information
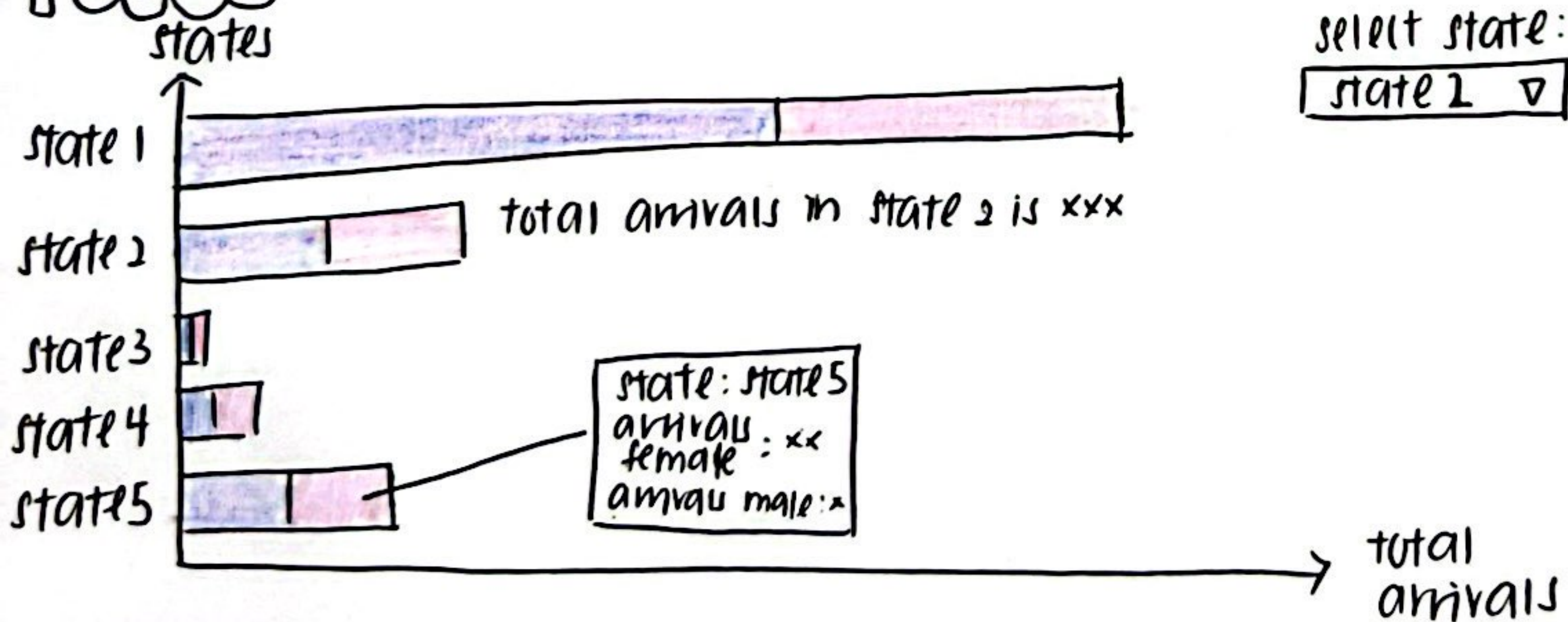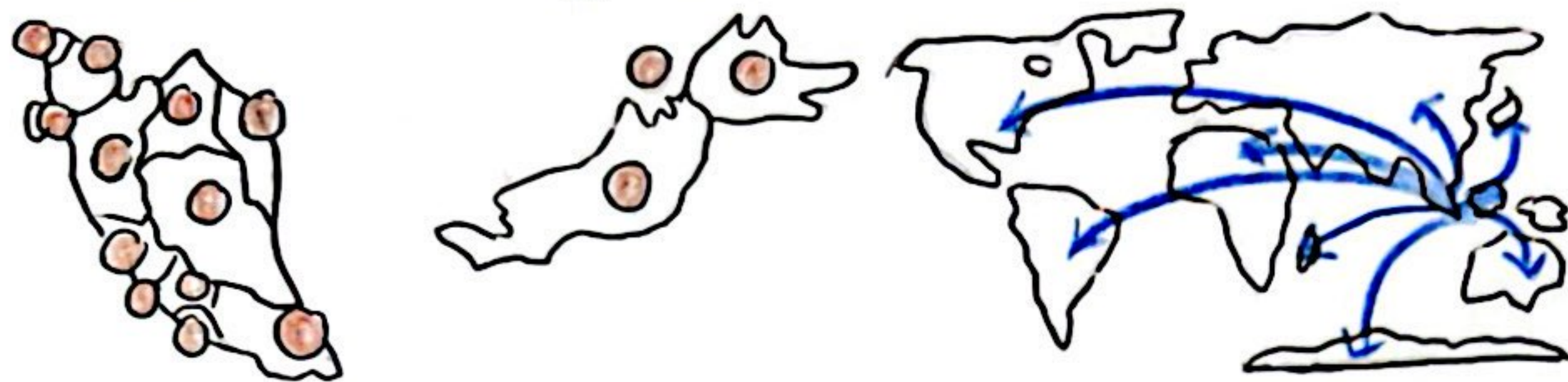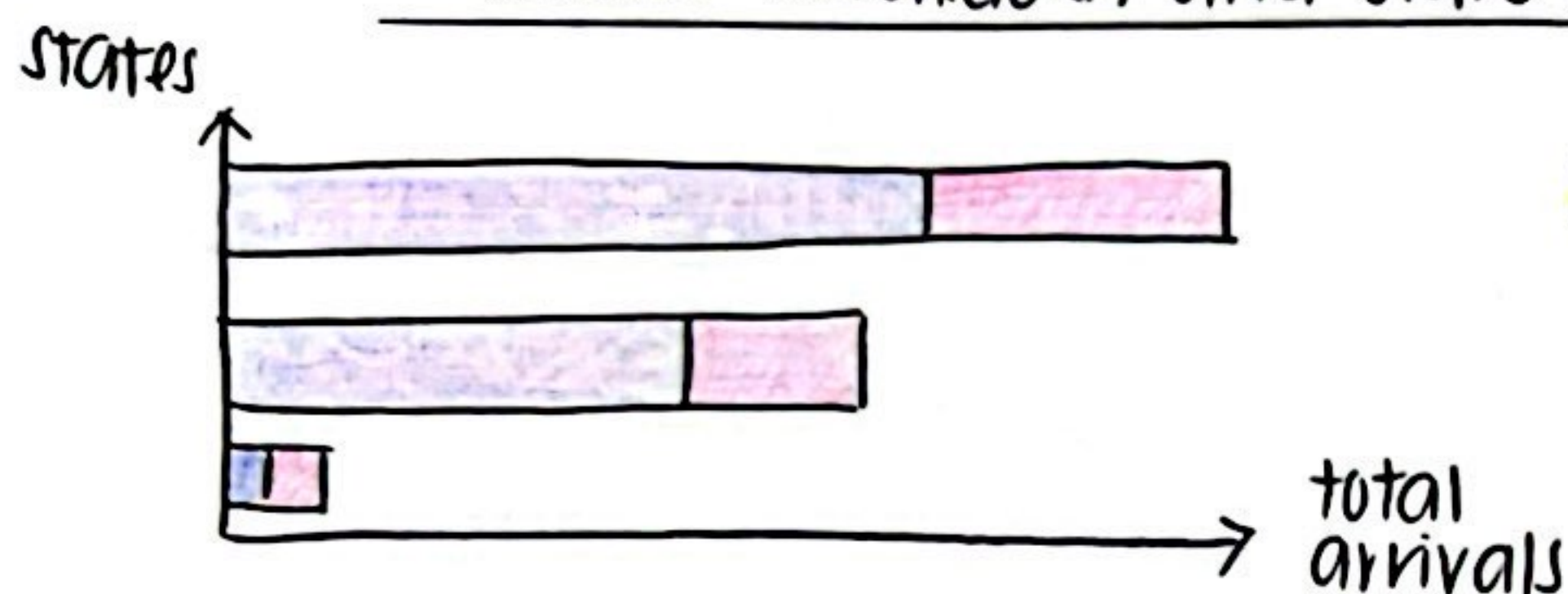
DISCUSS

plus (advantage):
- users can gain an idea on the gender distribution of tourist arrivals in each states in malaysia
- easy understanding and to comprehend due to the use of traditional colours for genders

cons (disadvantage):
- Johor has the highest amount of tourist arrivals which will result in other states tourist arrivals to be similar amount even if they are thousands or million counts apart

LAYOUT

Tourism Insights : Foreign Arrivals
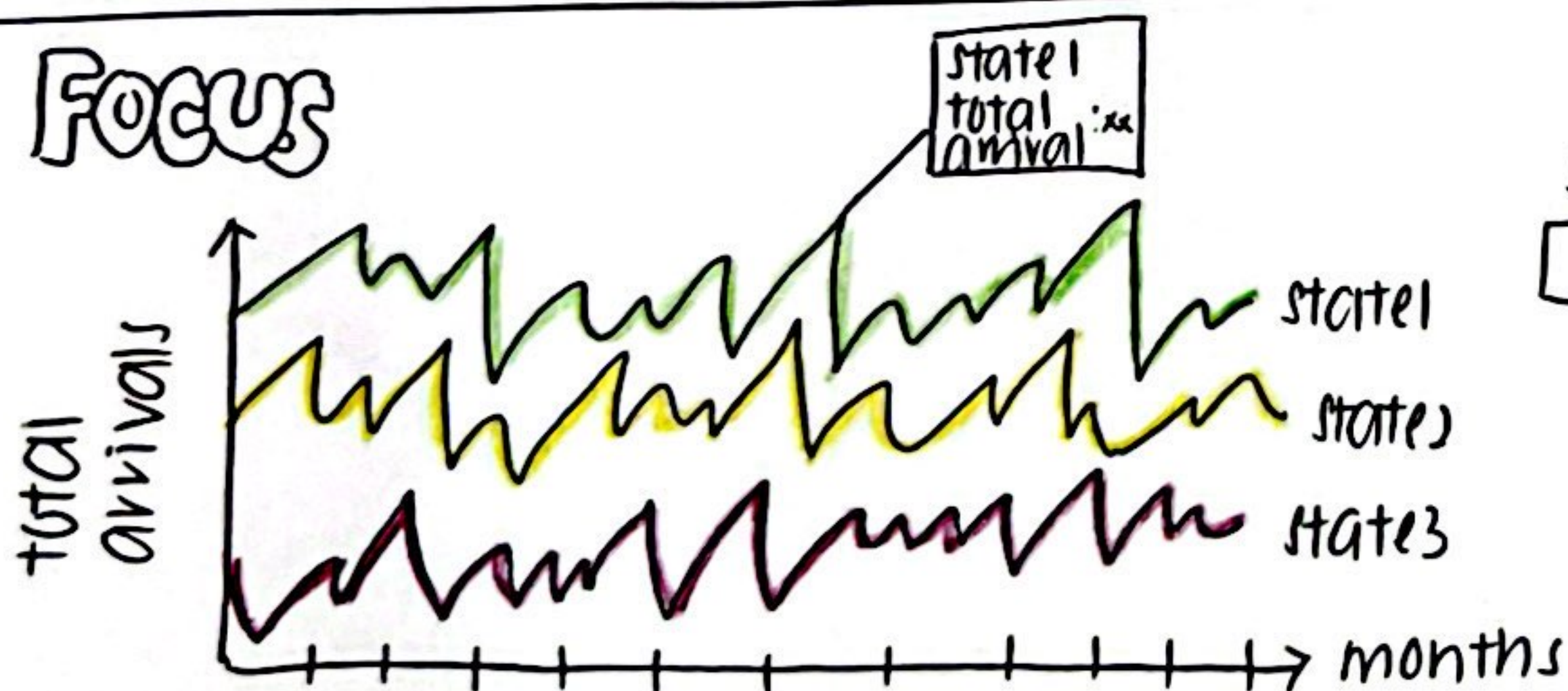
state popularity and International Arrivals

Gender Breakdown and state Preference

states

total arrivals

selangor Johor

statewise Analysis by month and year

total arrivals

state1
state2
state3
months

states

months

OPERATION

- dropdown menu filter for user to select viewing year for line chart
  - if year 2021 is chosen then only data for 2021 is shown on the chart

- users' mouse cursor hovers over the line in the multivarient line chart will show tooltips containing data information

- labels or annotations will be present at the end of line chart to indicate which state

FOCUS

state1
total arrival : xx

select year
2021   ▽

total arrivals

state1
state2
state3
months

map idiom : multivarient line chart

- data will be displayed in months for selected viewing year (lines will change depending on selection)

- filter option by dropdown menu to select viewing year

- tooltips contain information on state and total tourist arrival count

DISCUSS

pros (advantage):

- more in depth understanding on which months tourist activities peak and drop

- interactive charts will retain viewer attention and engagement
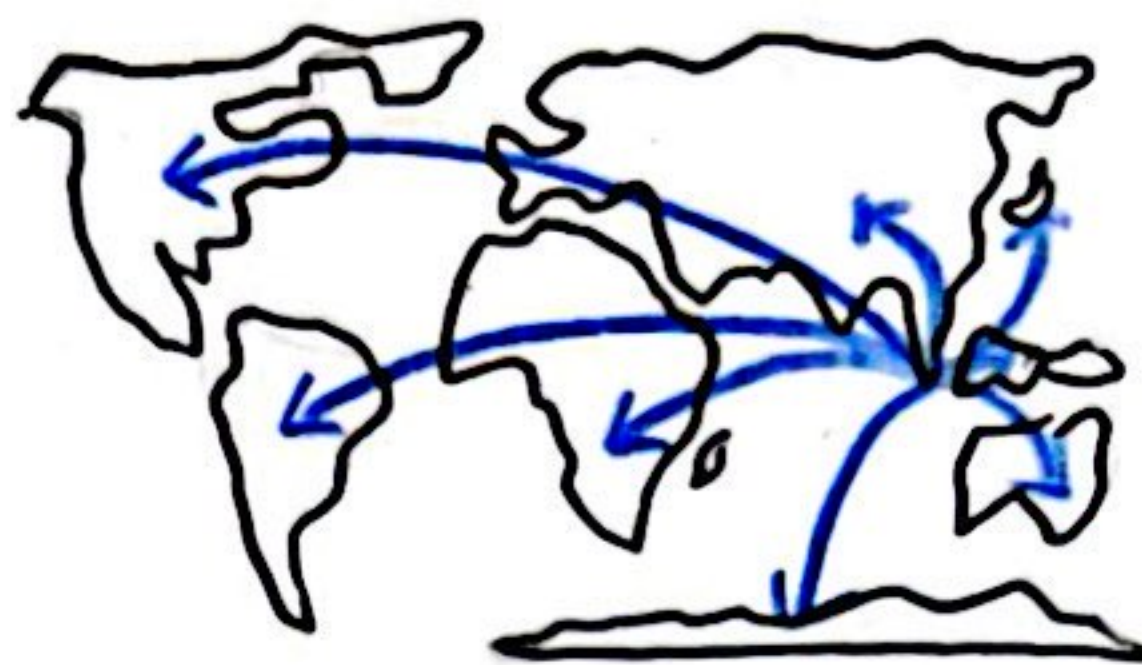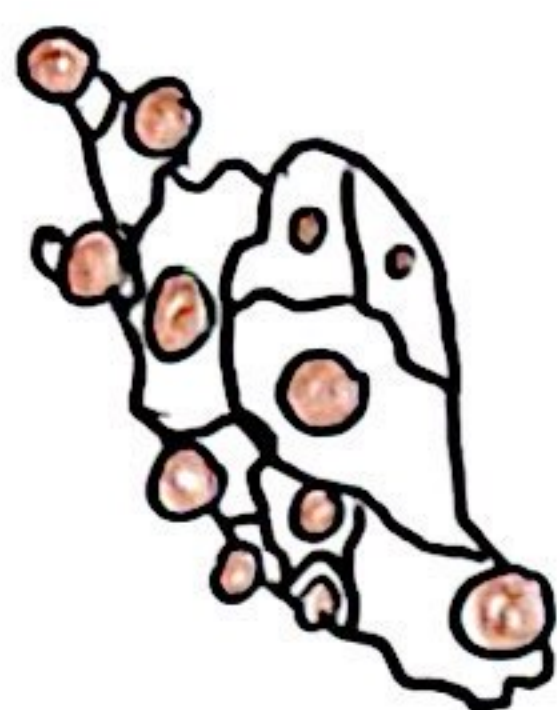
cons (disadvantage):

- whitelines, sightlines, and spacing must be paid attention to when close to line chart or else will be having messy dashboard layout with compact and compressed charts
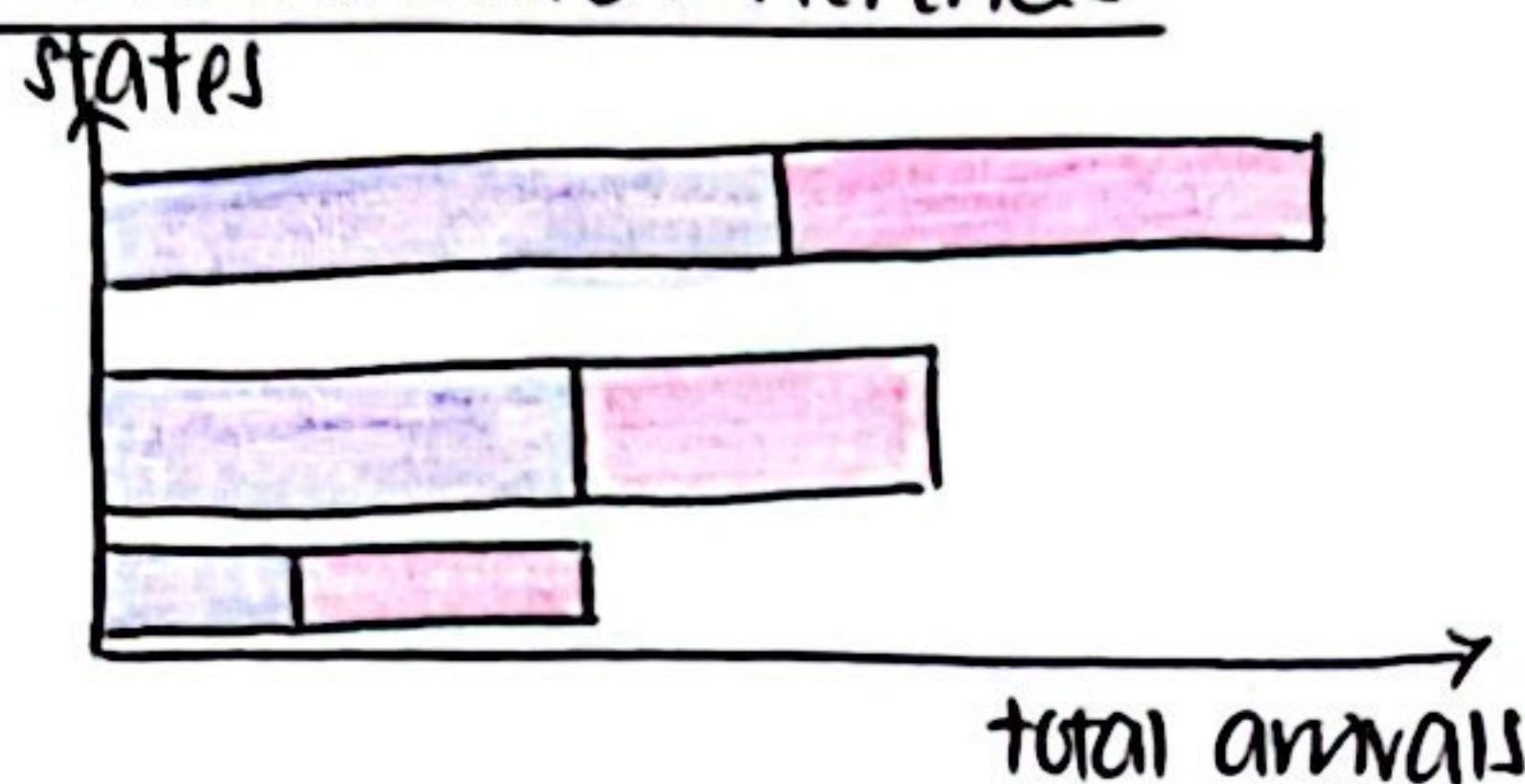
LAYOUT

Tourism Insights = Malaysia Foreign Arrivals
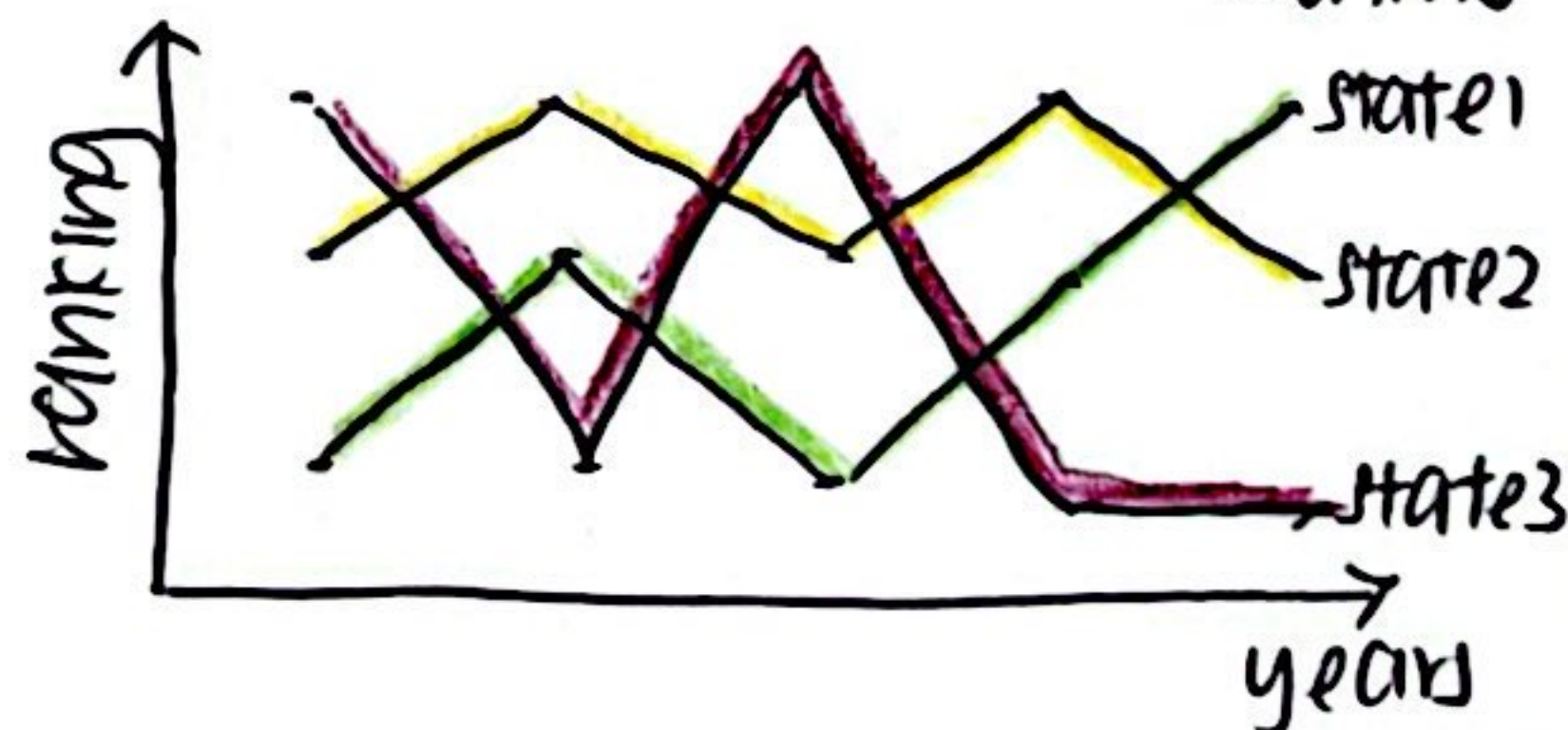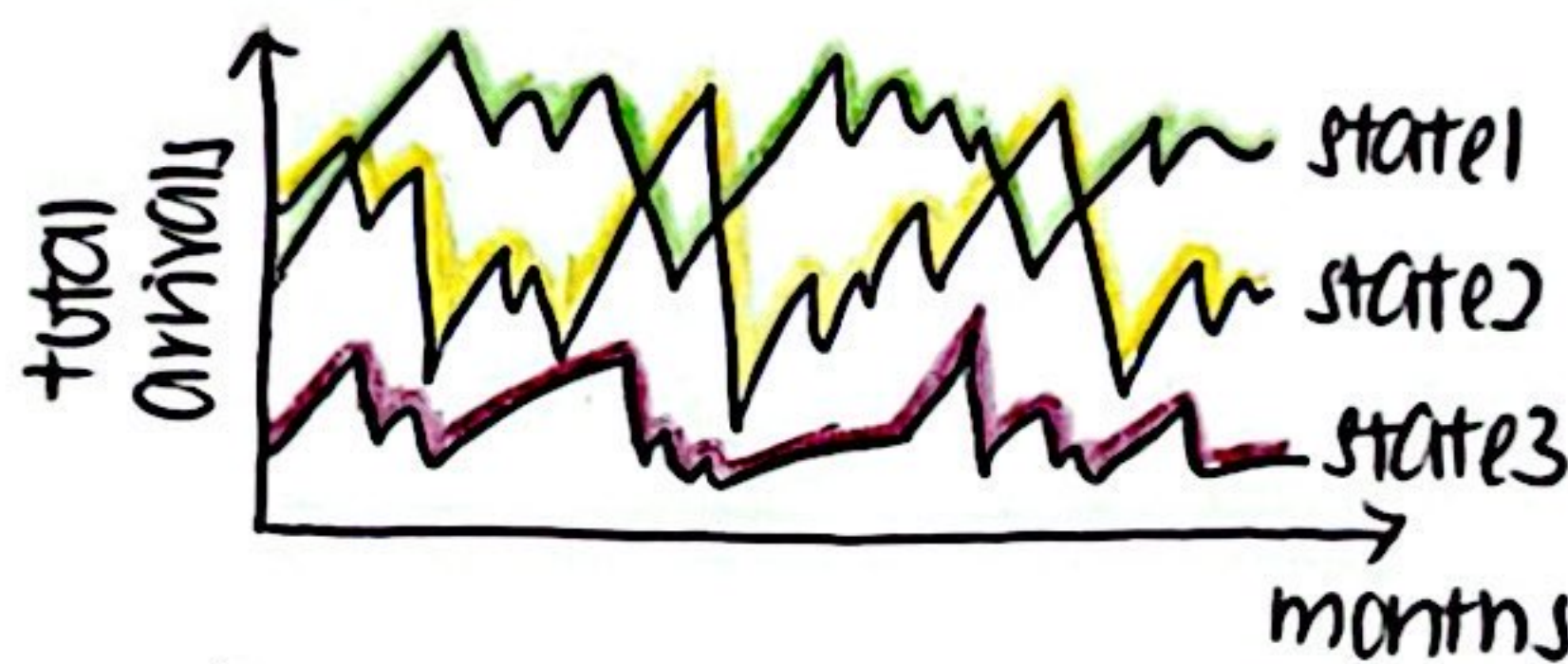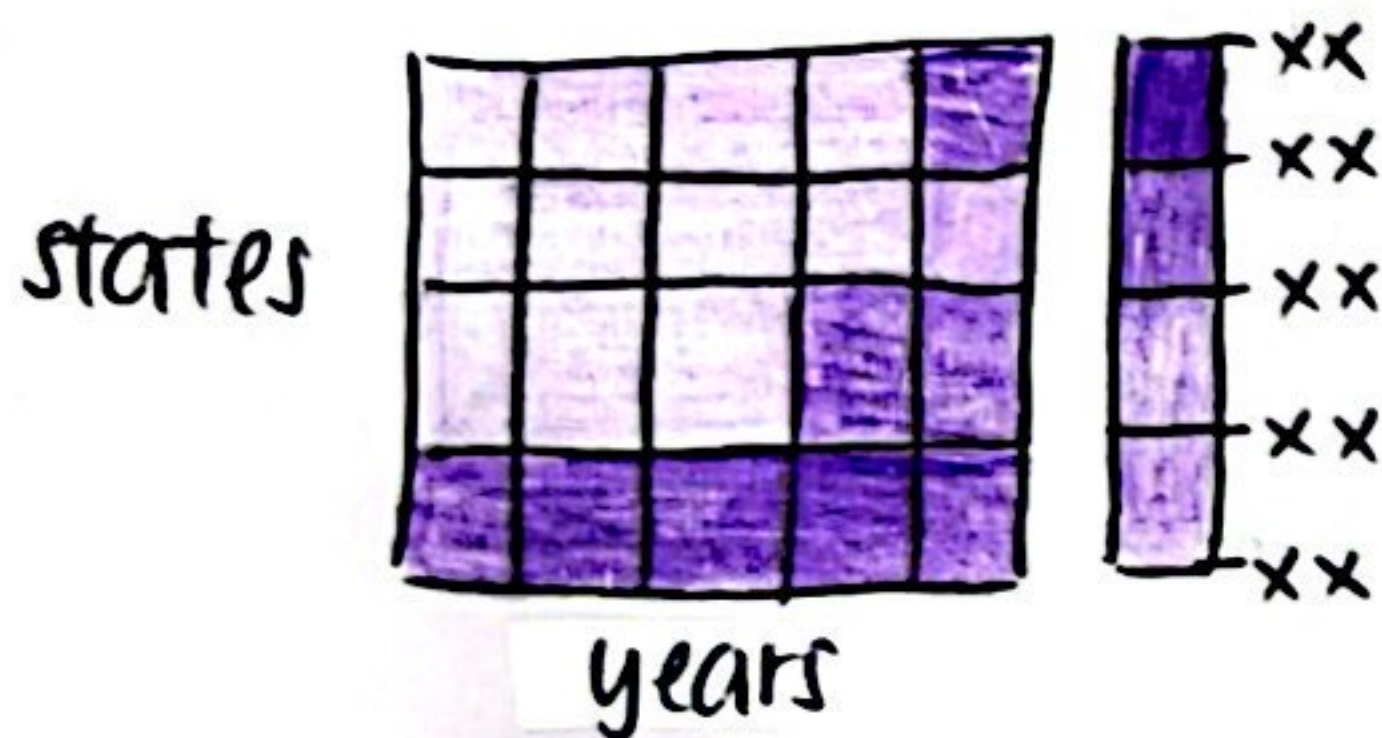
State Popularity and International Arrivals
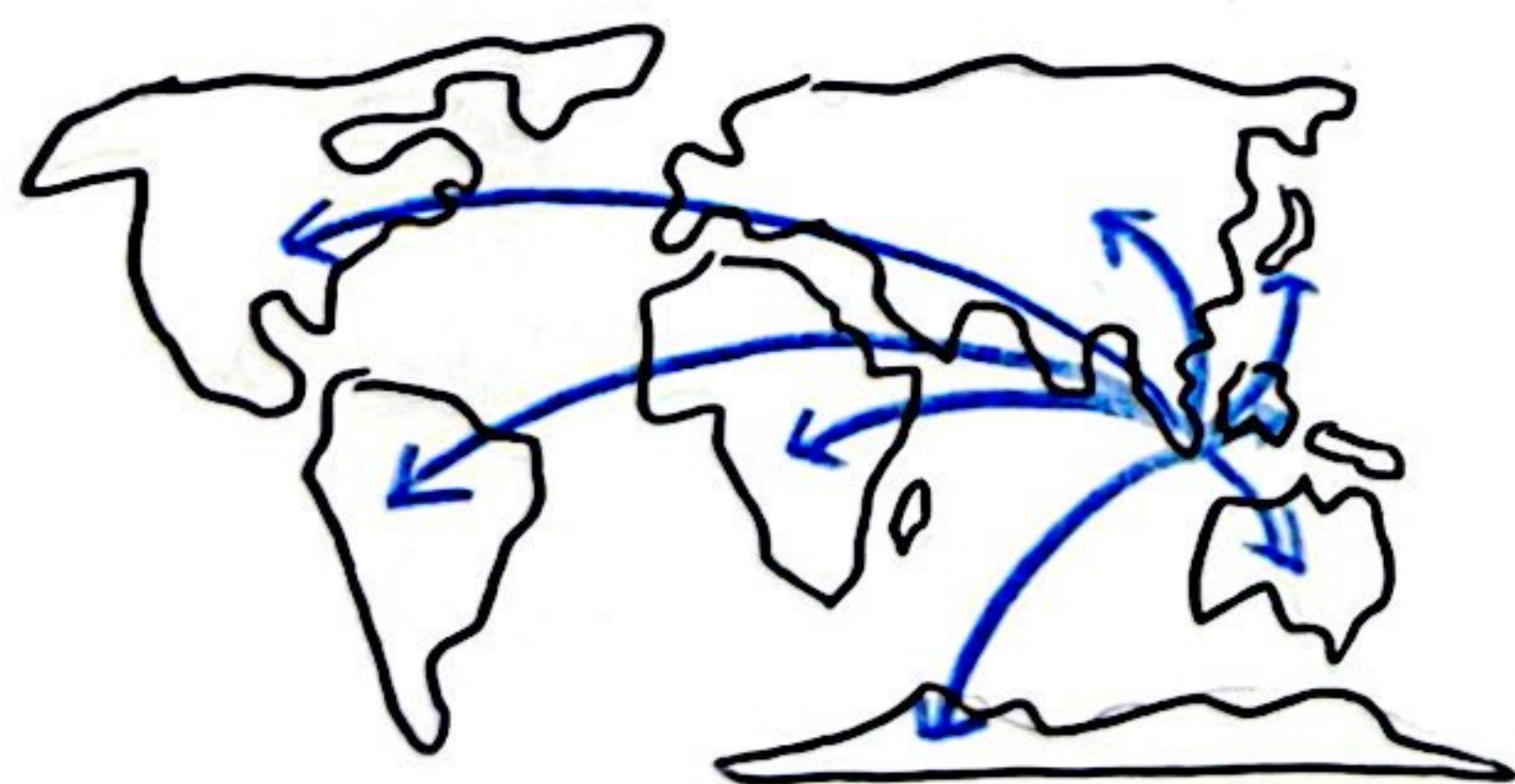

Gender Breakdown and state preferences

- ▨ male
- ☐ female

Total arrivals

states

total arrivals

Statewise Analysis by time

states

years

total arrivals

state1
state2
state3

months

states

month

ranking

state1
state2
state3

years

FOCUS

map idiom = flow chart

- data will be displayed as different thickness lines within the world map
- thickness the lines implies the higher number of total arrivals from the said country to malaysia
- tooltips show when user hovers over the lines

Title: Tourism Insights in malaysia
Author: Foo Kai Yan
Date: 13/10/2024
Sheet: 5   Unit: FIT3A

OPERATION

- users cursor if hover over the lines within the flow map then there will be tooltips shown
  - information displayed in the tools will be shown in a neat way with hierarchical structure

DETAIL

① estimated time and effort needed to complete the dashboard
  ↳ dataset needs to be cleaned and manipulated
    ↳ include longitude and latitude
    ↳ might need 2 to 3 days due to other units assessment responsibilities
  ↳ implementing the charts and graphs within the dashboard might require 2 weeks minimum as complex graphs require more time and effort to complete

② final checking might require friends to test view the dashboard on their devices to ensure no problem