Content

Software/Tools Needed

Libraries Needed

Topics Considered

Layout Concept Draft

Key Factors for Explanation

Potential Problems

Datasets Needed

Datasets Available on Opendosm

Possible Output Files

Software/Tools needed:

- MS Visual Studio Code
- IBM Watson Studio
- IBM Cognos Analytics
- Terminal

Libraries needed:

- Pandas
- Matplotlib
- Folium
- Plotly express
- Dash (html, dcc)
- *Seaborn
- *NumPy
- *BeautifulSoup (for web scraping)

Topic Considered:

- Johor Population (total, male vs female, newborn by years, etc.)
- OR
- Malaysia Population/Crime Record/Immigrants etc.

FINAL TOPIC: Newborn Trend in Malaysia (comparing states)

Layout concept draft:

- Other charts: choropleth map of total population/new born in year/total
- Can use choropleth map to compare correlation of different factors with newborn in the different states

Newborn Trend in Malaysia

Total Newborn by Year (Line Chart)

Selected Year				
Total Newborn 12345				
Male vs Female (Waffle Chart) (Blue vs Pink)	Newborn by States (Choropleth Map, green)			
Race (Hierarchy Chart)				

Income	Expenditure
(Choropleth Map, green)	(Choropleth Map, red)
Poverty	Inequality (Income)
(Choropleth Map, red)	(Choropleth Map, red)

- diagnose and explain the situation from the perspective of social and economy, e.g.

- Income/annual salary
- GDP
- Living cost
- Inflation
- Unemployment rate
- Tax
- Marriage percentage for age 25 40/by race
- Health indices like BMI
- Poverty
- Income inequality
- Etc.

- Use GitHub to host the project

Potential Problem(s):

- hosting issue (if cannot host a website then try on Cognos Analytics to create dashboard)
- unable to access datasets

Datasets required:

- Population by states
- Newborn/birth by year, states, sex and ethnicity
- income/annual salary
- GDP
- living cost
- inflation

- unemployment rate
- tax
- Poverty
- Income inequality
- marriage percentage for age 25 -40/by race
- health indices like BMI

Datasets available on OpenDOSM:

Population	by year, state, age, sex, ethnicity	
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Birth	by year, state, sex, ethnicity
Income	mean and median by year, state
Expenditure	income (mean & median), expenditure and poverty by year, state
Poverty	by year, state
Income inequality	by <mark>year, state</mark>
GDP	
Consumer prices	

Possible Output Files:

- HTML file for the dashboard
- Excel worksheet for data tables, analysis, visuals
- Python notebook file for data wrangling, analysis, visuals
- Python coding file for dashboard