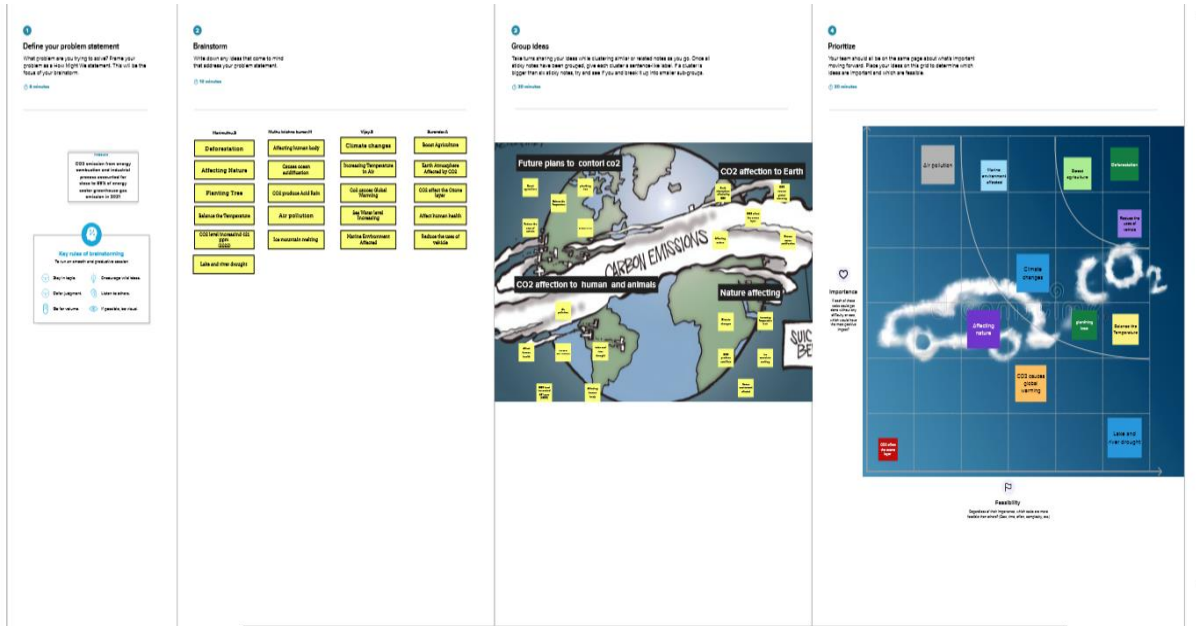# Project Report Template

INDRODUCTION:

Carbon dioxide (CO_2) is released into Earth's atmosphere mostly by the burning of carbon-containing fuels and the decay of wood and other plant matter. Under all conditions found naturally on Earth, CO_2 is an invisible, odorless gas. It is removed from the atmosphere mostly by plants, which extract carbon from CO_2 to build their tissues, and by the oceans, in which CO_2 dissolves.
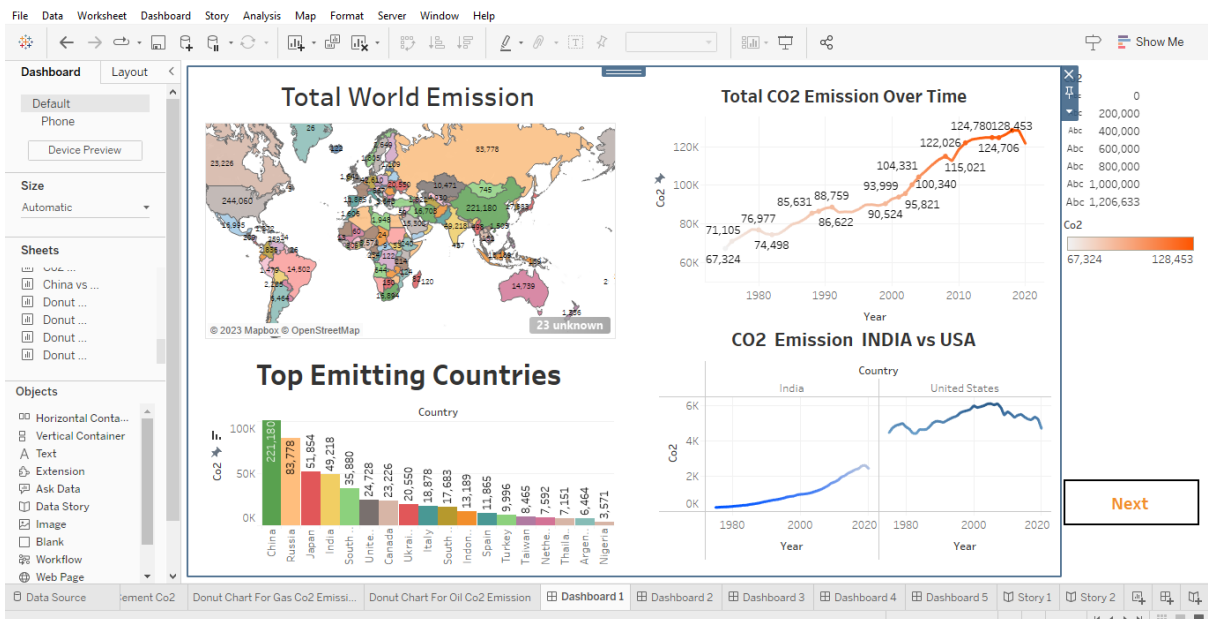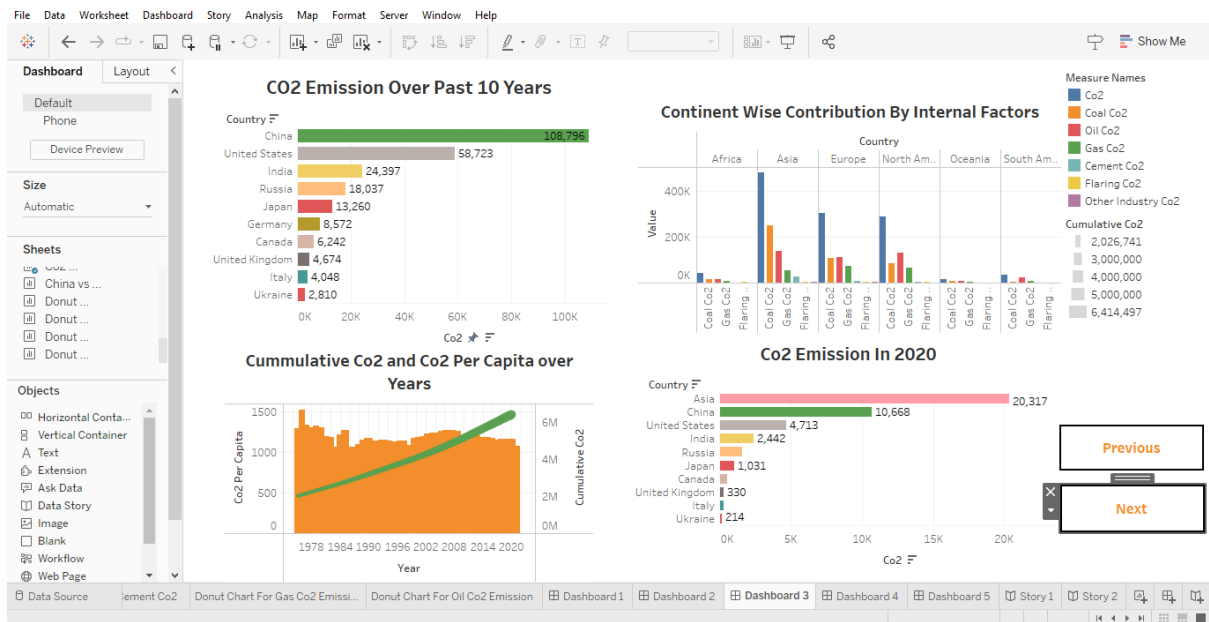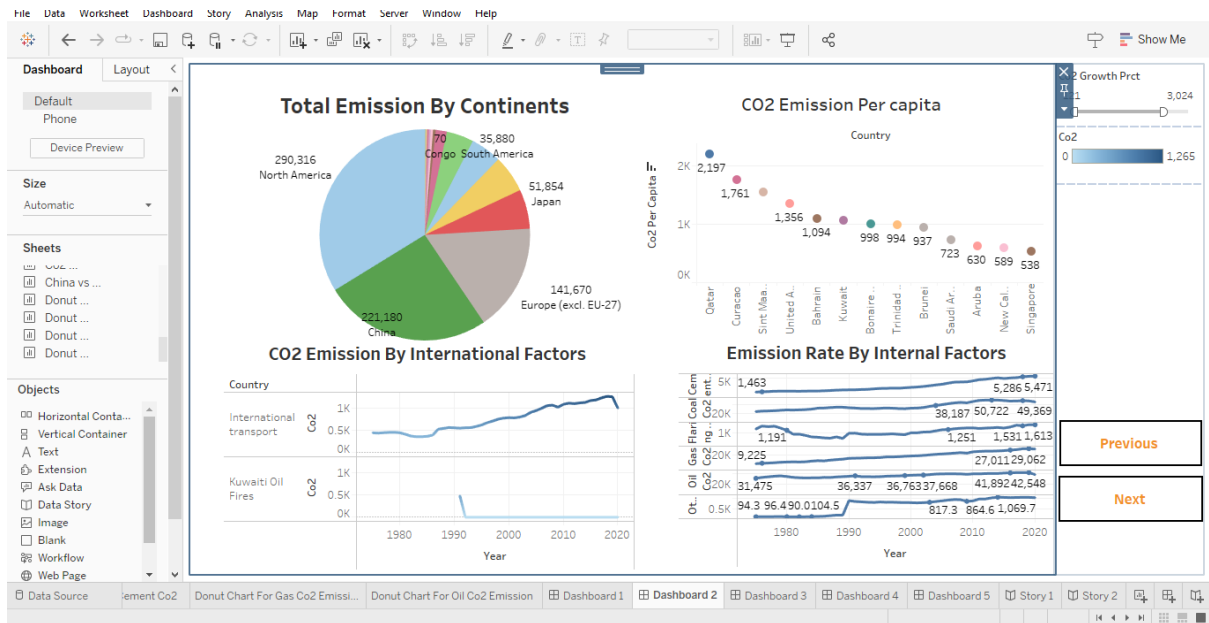
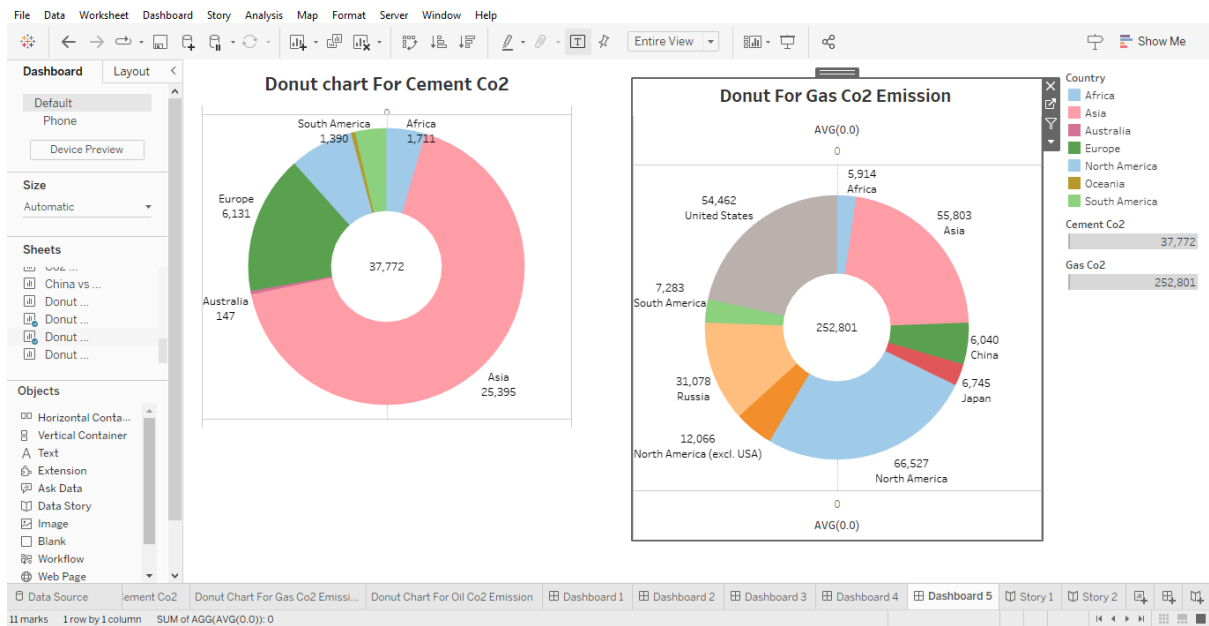## Problem Definition & Design Thinking:

Empathy Map

Brain Strom & Idea Prioritization

Result:

Dashboard 2 — CO2 Emission Dashboard

Total Emission By Continents
- 70 Congo
- 35,880 South America
- 290,316 North America
- 51,854 Japan
- 141,670 Europe (excl. EU-27)
- 221,180 China

CO2 Emission Per capita
Country

Value	Country
2,197	Qatar
1,761	Curacao
1,356	Sint Maa.
1,094	United A.
998	Bahrain
994	Kuwait
937	Bonaire
723	Trinidad
630	Saudi Ar.
589	Aruba
538	New Cal. / Singapore

Co2 Per Capita

CO2 Emission By International Factors
Country

- International transport
- Kuwaiti Oil Fires

Year: 1980 1990 2000 2010 2020

Emission Rate By Internal Factors
- Coal Cem ent.: 5K 1,463 ... 5,286 5,471
- Coal: 20K 38,187 50,722 49,369
- Gas Flar ing: 1K 1,191 ... 1,251 1,531 1,613
- Gas: 20K 9,225 ... 27,011 29,062
- Oil: 20K 31,475 36,337 36,763 37,668 41,892 42,548
- Ot.: 0.5K 94.3 96.4 90.0 104.5 817.3 864.6 1,069.7

Year: 1980 1990 2000 2010 2020

Previous **Next**

Co2 Growth Prct — 1 — 3,024
Co2 — 0 — 1,265

Dashboard 3 — CO2 Emission Dashboard

CO2 Emission Over Past 10 Years
Country

Country	Co2
China	108,796
United States	58,723
India	24,397
Russia	18,037
Japan	13,260
Germany	8,572
Canada	6,242
United Kingdom	4,674
Italy	4,048
Ukraine	2,810

Co2: 0K 20K 40K 60K 80K 100K

Continent Wise Contribution By Internal Factors
Country: Africa | Asia | Europe | North Am... | Oceania | South Am...

Value: 0K 200K 400K

Measure Names:
- Co2
- Coal Co2
- Oil Co2
- Gas Co2
- Cement Co2
- Flaring Co2
- Other Industry Co2

Cumulative Co2:
- 2,026,741
- 3,000,000
- 4,000,000
- 5,000,000
- 6,414,497

Cummulative Co2 and Co2 Per Capita over Years
Co2 Per Capita: 0 500 1000 1500
Cumulative Co2: 0M 2M 4M 6M
Year: 1978 1984 1990 1996 2002 2008 2014 2020

Co2 Emission In 2020
Country

Country	Co2
Asia	20,317
China	10,668
United States	4,713
India	2,442
Russia	
Japan	1,031
Canada	
United Kingdom	330
Italy	
Ukraine	214

Co2: 0K 5K 10K 15K 20K

Previous **Next**

Advantages & Disadvantages:

Advantages of Co2:

Carbon dioxide plays a key role in Earth's carbon cycle, the set of processes that cycle carbon in many forms throughout our environment Photosynthesis, the biochemical process by which plants and some microbes create food, uses up carbon dioxide. Photosynthetic organisms combine CO_2 and water (H_2O) to produce carbohydrates (such as sugars) and emit oxygen as a by-product

Disadvantages of Co2:

CO2 emissions act like a blanket in the air, trapping heat in the atmosphere, and warming up the Earth [11]. This layer prevents the Earth from cooling, and thus raises global temperatures. Global warming would affect environmental conditions, food and water supplies, weather pattern, and sea levels.

High CO2 levels, generally over 1000 ppm, indicate a potential problem with air circulation and fresh air in a room or building. In general, high CO2 levels indicate the need to examine the HVAC system. High carbon dioxide levels can cause poor air quality and can even extinguish pilot lights on gas-powered appliances

Applications:

New pathways to use CO2 in the production of fuels, chemicals and building materials are generating global interest
CO2 could be an important raw material for products that require carbon.
The market for CO2 use will likely remain relatively small in the short term, but early opportunities can be cultivated.
CO2 use has potential to support climate goals, but robust life-cycle assessment is essential.

Conclusion:

The environmental and economic case for developing a range of existing low-carbon technologies is well-established. Innovation could bring new technologies to market in all the areas of mitigation discussed, in turn enabling more ambitious decarbonisation pathways. It is down to decisive policy from governments around the world to unlock the full potential of existing and new technology to deliver the urgently needed transition to global net zero.

Future Scope:

- CO2 growth in 2022 was well below global GDP growth of 3.2%.

- Emissions from natural gas fell by 1.6% or 118 Mt. Increased emissions from coal more than offset reductions from nat/uralgas.
- Emissions from oil grew even more than emissions from coal, rising by 2.5% or 268 Mt to 11.2.
- A strong expansion of renewables limited the rebound in coal power emissions.
- China's emissions were relatively flat in 2022, declining by 23 Mt or 0.2%.
- The European Union saw a 2.5% or 70 Mt reduction in CO2 emissions.

- US emissions grew by 0.8% or 36 Mt. The buildings sector saw the highest emissions growth, driven by extreme temperatures.

Appendix:
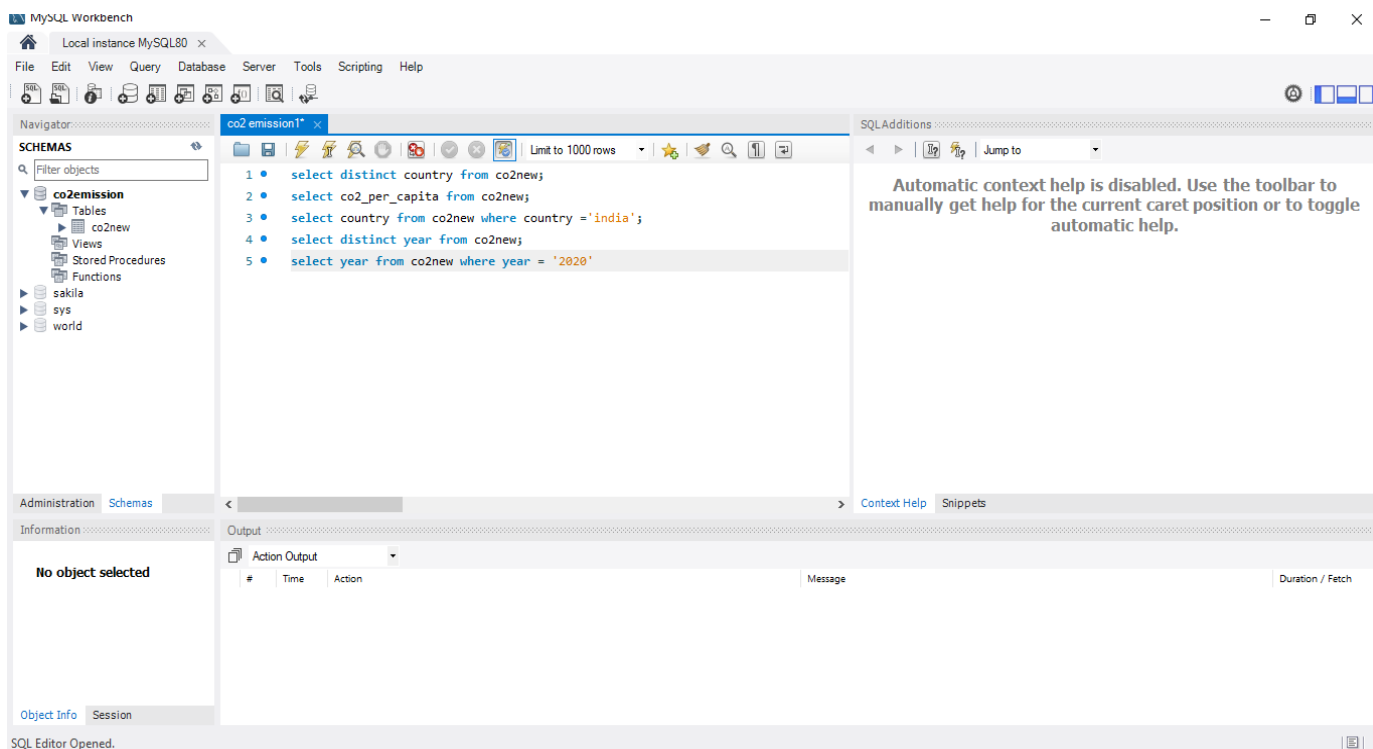
Embed Code:

Embed Code for Story

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Embed Code for dashboard

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3                                                                        '
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rss.png'       style='border:       none'       /></a></noscript><object
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