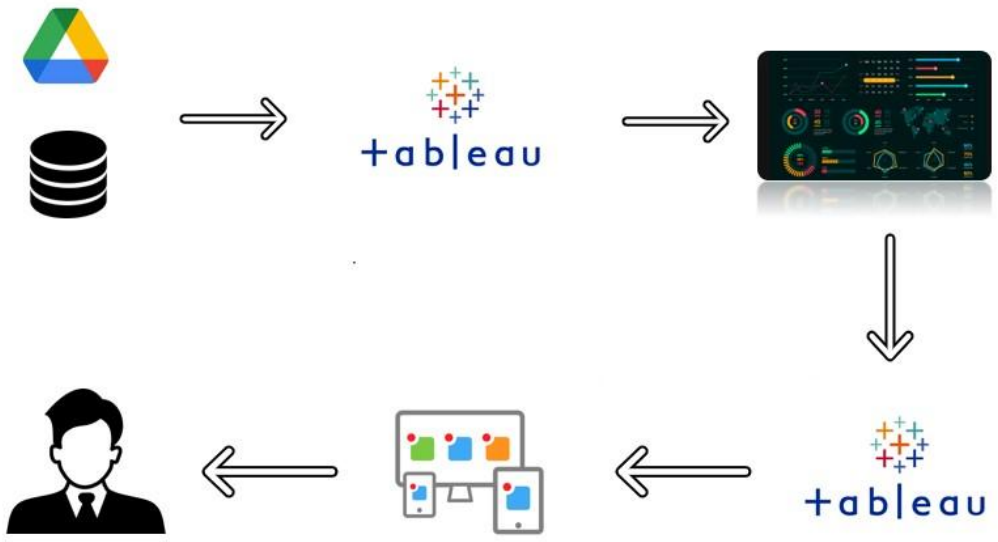
# Depression: A Common Mental Disorder

Everyone experiences sadness and unhappiness at some point in their lives. Clinical Depression, however, is more intense and of longer duration than typical sadness or grief, which interferes with a person's ability to engage in daily activities. The symptoms of depression can include: loss of interest or pleasure in previously enjoyable activities, major changes in appetite (either significantly reduced or increased), sleep problems (sleeping too much or too little), fatigue, a feeling of worthlessness or hopelessness, problems with concentration and making decisions, and thoughts of suicide. This mental disorder is common and the percentage of people suffering from depression varies according to countries. In this project we are trying to analyze the depression data for different countries and extract some insights from the data using Business Intelligence tools. To Extract the Insights from the data and put the data in the form of visualizations, Dashboards and Story we employed Tableau tool.

## Technical Architecture:



## Project Flow

To accomplish this, we have to complete all the activities listed below,

- **Define Problem / Problem Understanding**

o Specify the business problem

o Business requirements

o Literature Survey

o Social or Business Impact.

- **Data Collection & Extraction from Database**

o Collect the dataset,

o Storing Data in DB

o Perform SQL Operations

o Connect DB with Tableau

- **Data Preparation**

o Prepare the Data for Visualization

- **Data Visualizations**

o No of Unique Visualizations

- **Dashboard**

o Responsive and Design of Dashboard

- **Story**

o No of Scenes of Story

- **Performance Testing**

o Amount of Data Rendered to DB ‘

o No of Calculation Fields

o No of Visualizations/ Graphs

● **Web Integration**

o Dashboard and Story embed with UI With Flask

# Milestone 1: Define Problem / Problem Understanding

## Activity 1: Specify the business problem

In this project we are trying to analyze the depression data for different countries and extract some insights from the data using Business Intelligence tools. To Extract the Insights from the data and put the data in the form of visualizations, Dashboards and Story we employed Tableau tool.

## Activity 2: Business requirements

This project is useful from the perspective of countries who have high number of people suffering with depression. There are many complementing reasons which support depression. The countries which have high percentage of people having depression can see the underlying reason for the depression in their country. The ultimate goal is to gain insights and improve performance through data visualization techniques.

## Activity 3: Literature Survey

A literature survey for the depression analysis would involve researching and reviewing previous studies, articles, and reports on the topic. This could include information on the methods and techniques used for tackling depression, as well as the results and conclusions of these studies. Some potential areas of focus for a literature survey on depression analysis could include : Risk management, which involves identifying, assessing, and mitigating the various risks facing a country, such as defense risk, market risk, and operational risk.

The reasons that cause depression or support depression.

### Activity 4: Social or Business Impact.

Social Impact: This project throws light on the reasons causing depression, how they are affecting countries all around the world. There are a number of reasons which support depression, they can be lifestyle habits or different mental disorders. If these reasons are controlled, the percentage of depression affected people will reduce.

Business Model/Impact: The business impact of this project is to the countries that are affected by depression huge amounts. The reasons are stated in the projects as different factors affect depression.

## Milestone 2: Data Collection & Extraction from Database

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, evaluate outcomes and generate insights from the data

### Activity 1: Downloading the dataset

Please use the link to download the dataset: Link

#### Activity 1.1: Understand the data

data contains all the meta information regarding the columns described in the CSV files

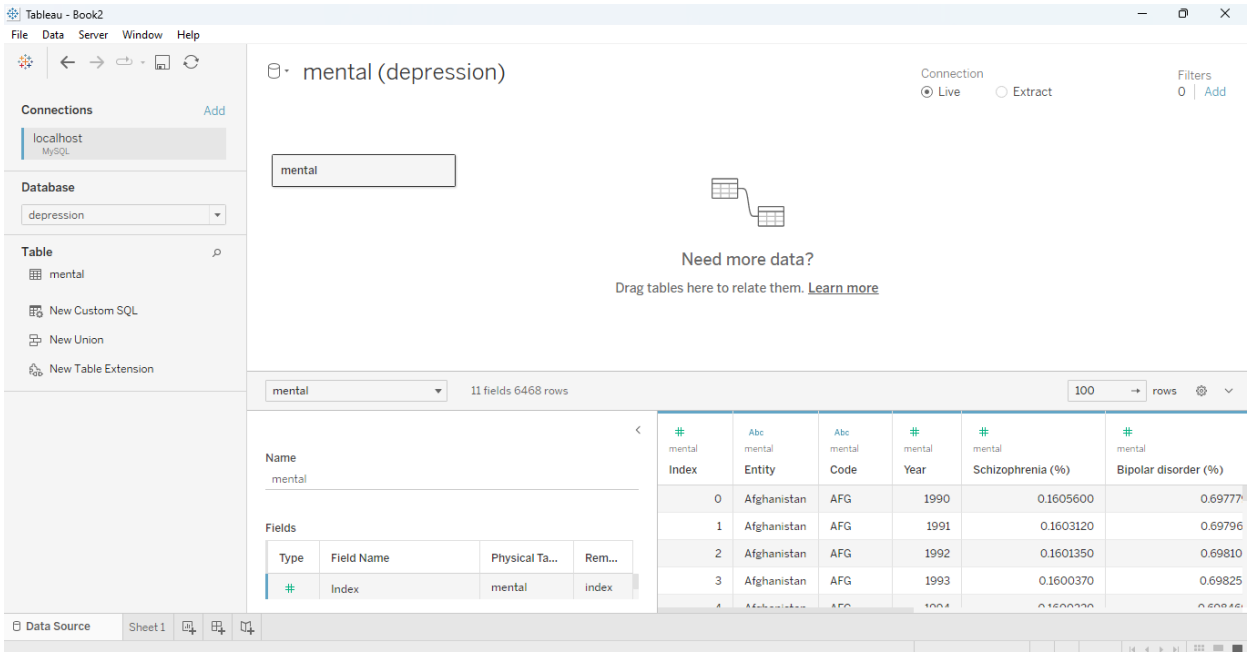
**Column Description of the Dataset:**

1. Index: Index of the entry
2. Entity: Country Name
3. Code: Code for Country name
4. Year: Year of entry

5. Schizophrenia (%): Percentage of people affected by Schizophrenia
6. Bipolar disorder (%): Percentage of People affected by Bipolar Disorder
7. Eating disorder (%): Percentage of People affected by Eating Disorders
8. Anxiety Disorder (%): Percentage of People affected by Anxiety Disorder
9. Drug Use Disorder (%): Percentage of People affected by Drug Use Disorder
10. Depression (%): Percentage of People affected by Depression
11. Alcohol use Disorder (%): Percentage of people affected by Alcohol use

## Activity 2: Storing Data in DB & Perform SQL Operations

## Activity 3: Connect DB with Tableau



## MILESTONE 3 : DATA PREPARATION

### Activity 1: Prepare the Data for Visualization

Preparing the data for visualization involves cleaning the data to remove irrelevant or missing data, transforming the data into a format that can be easily visualized, exploring the data to identify patterns and trends, filtering the data to focus on specific subsets of data, preparing the data for visualization software, and ensuring the data is accurate and complete. This process helps to make the data easily understandable and ready for creating visualizations to gain insights into the performance and efficiency.

# Milestone 4: Data Visualization

Data visualization is the process of creating graphical representations of data to help people understand and explore the information. The goal of data visualization is to make complex data sets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

### Activity 1: No of Unique Visualizations

The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyze the performance and efficiency of banks include bar charts, line charts, heat maps, scatter plots, pie charts, Maps etc. These visualizations can be used to check the complementing disorders and the lifestyle habits complementing depression among countries. It also shows the depression among countries.

**Activity 1.1 : Average Alcohol Use Disorder %**

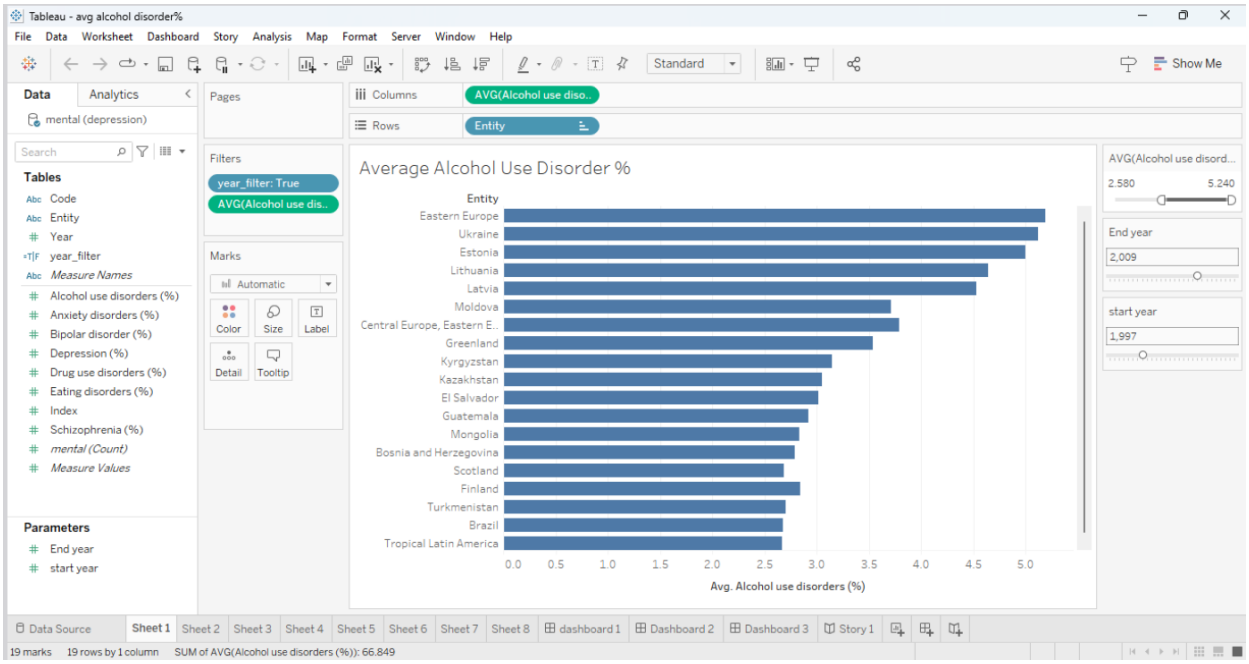
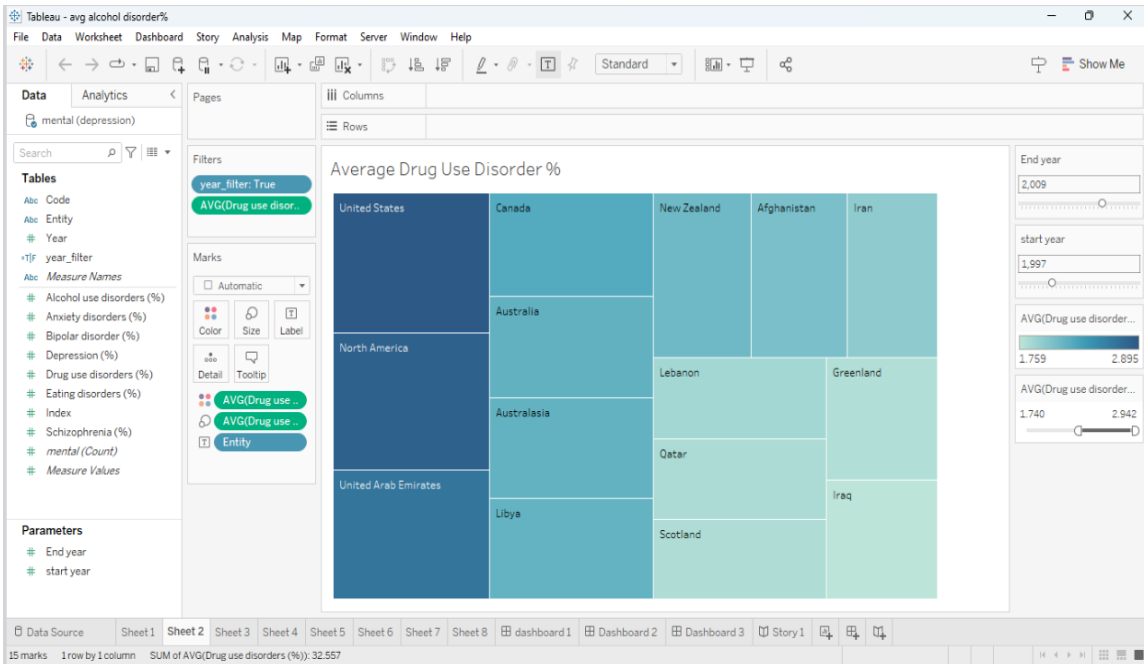
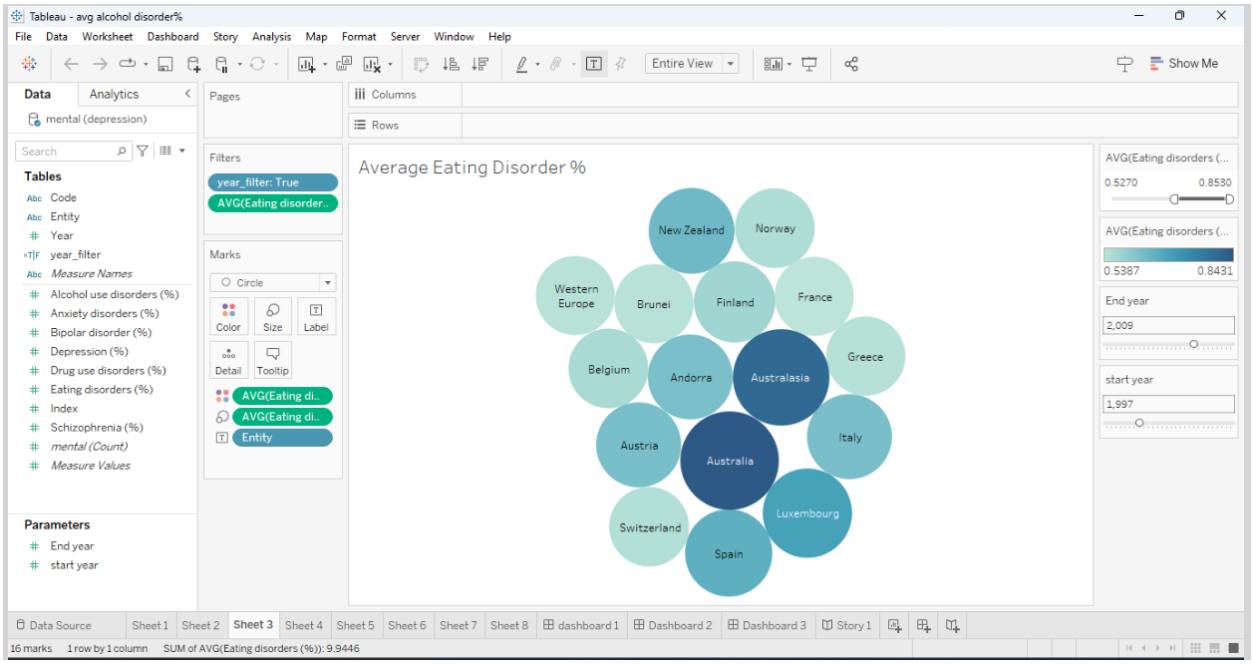


Tableau - avg alcohol disorder%
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Standard
Show Me
Data
Analytics
mental (depression)
Search
Tables
Abc Code
Abc Entity
# Year
year_filter
Abc Measure Names
# Alcohol use disorders (%)
# Anxiety disorders (%)
# Bipolar disorder (%)
# Depression (%)
# Drug use disorders (%)
# Eating disorders (%)
# Index
# Schizophrenia (%)
# mental (Count)
# Measure Values
Parameters
# End year
# start year
Pages
Filters
year_filter: True
AVG(Alcohol use dis..
Marks
Automatic
Color
Size
Label
Detail
Tooltip
Columns
AVG(Alcohol use diso..
Rows
Entity
Average Alcohol Use Disorder %
Entity
Eastern Europe
Ukraine
Estonia
Lithuania
Latvia
Moldova
Central Europe, Eastern E..
Greenland
Kyrgyzstan
Kazakhstan
El Salvador
Guatemala
Mongolia
Bosnia and Herzegovina
Scotland
Finland
Turkmenistan
Brazil
Tropical Latin America
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
Avg. Alcohol use disorders (%)
AVG(Alcohol use disord...
2.580 5.240
End year
2,009
start year
1,997
Data Source
Sheet 1
Sheet 2
Sheet 3
Sheet 4
Sheet 5
Sheet 6
Sheet 7
Sheet 8
dashboard 1
Dashboard 2
Dashboard 3
Story 1
19 marks
19 rows by 1 column
SUM of AVG(Alcohol use disorders (%)): 66.849

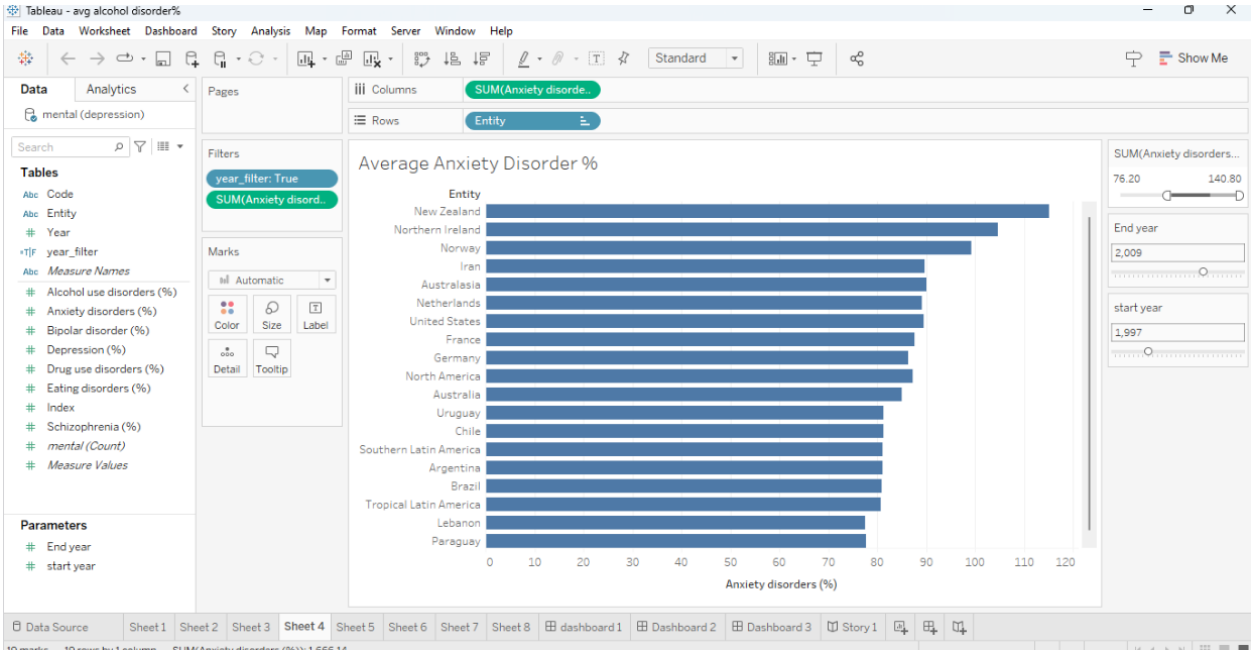
## Activity 1.2: Average Drug Use Disorder %



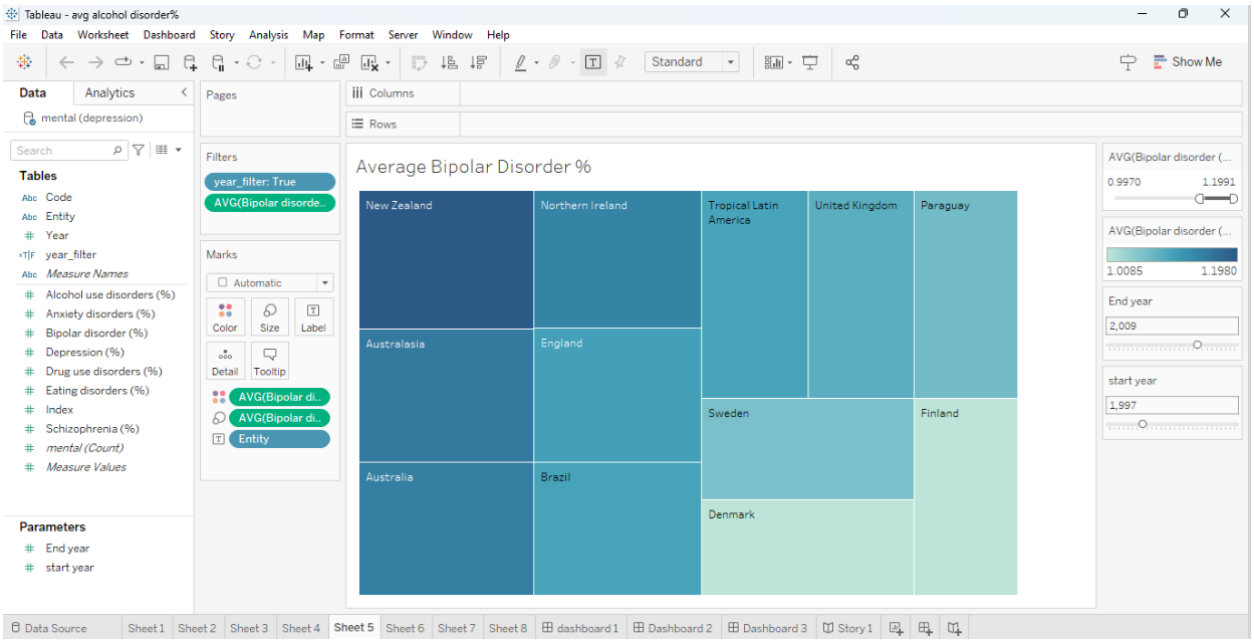

## Activity 1.3: Average Eating Disorder %



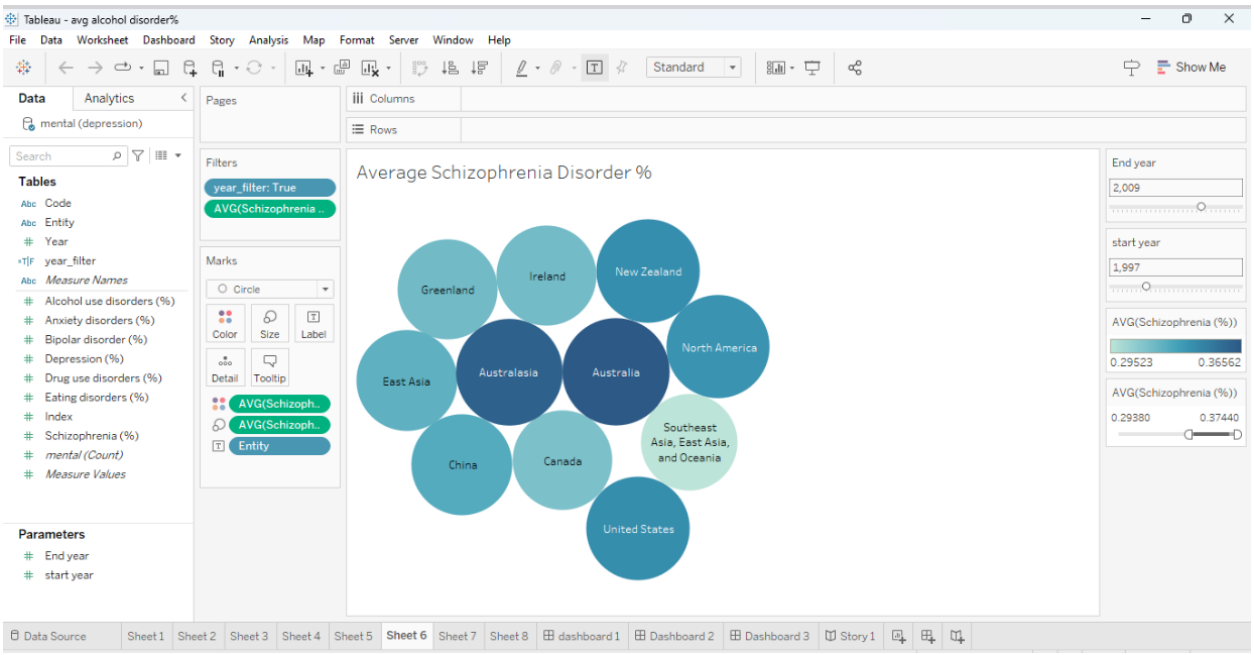
## Activity 1.4: Average Anxiety Disorder %



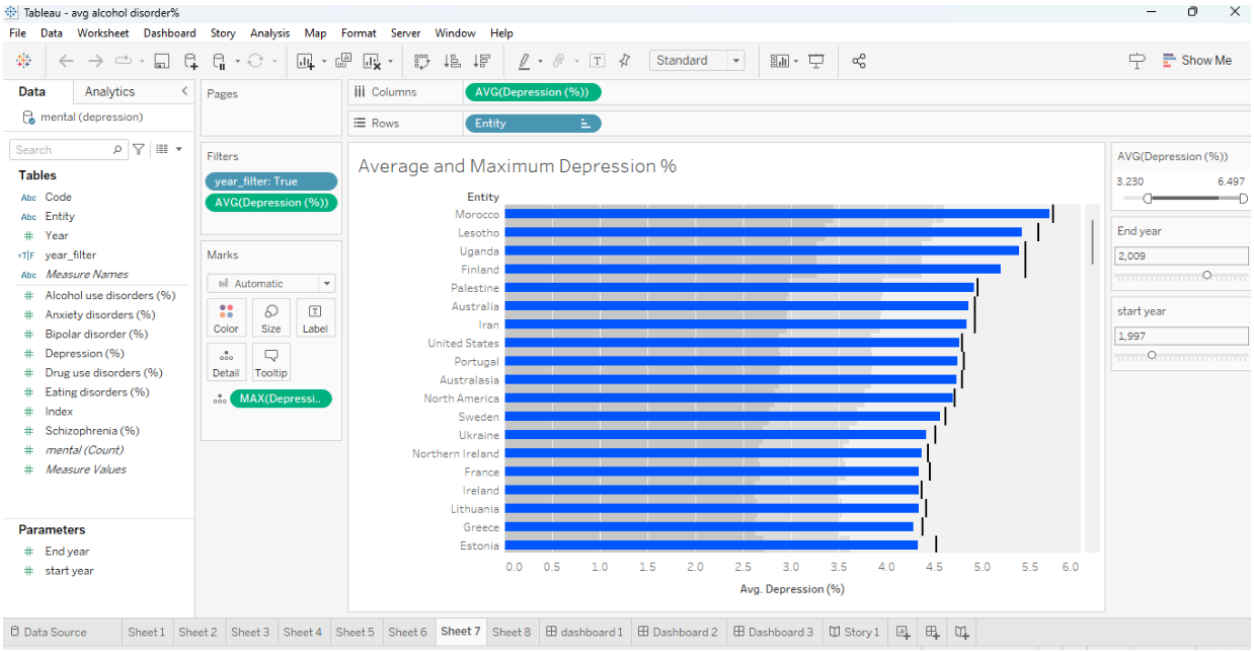

## Activity 1.5: Average Bipolar Disorder %



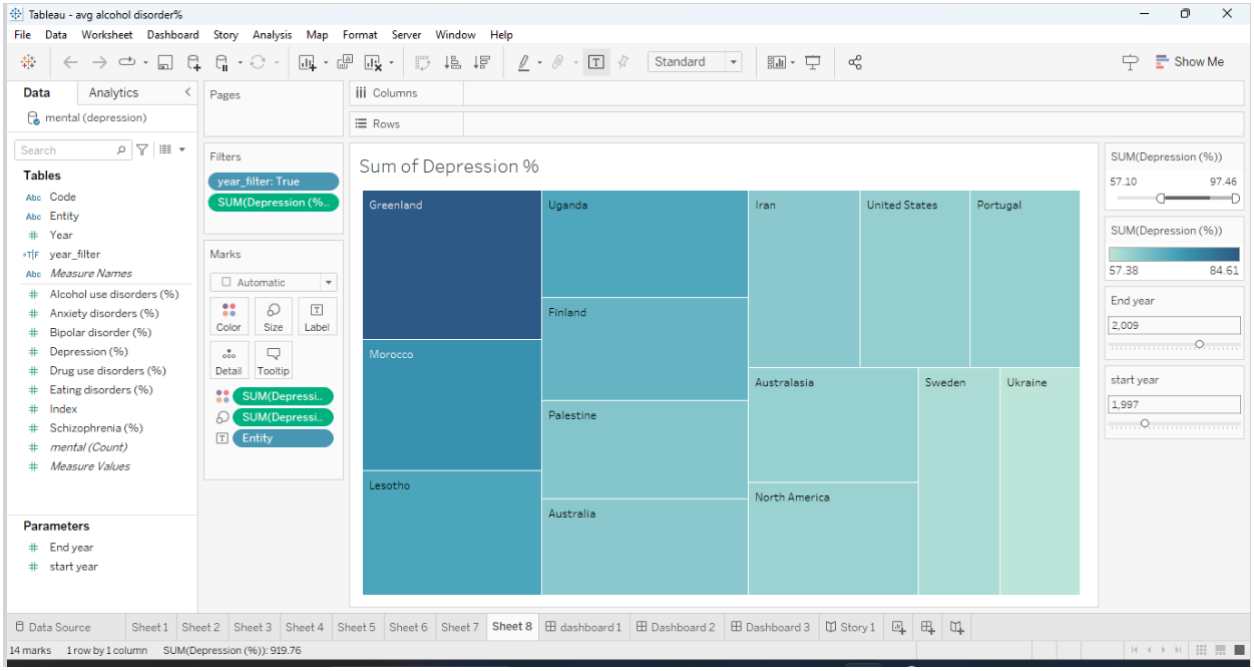
## Activity 1.6: Average Schizophrenia Disorder %




## Activity 1.7: Average and Maximum Depression %



**Activity 1.8: Sum of Depression %**

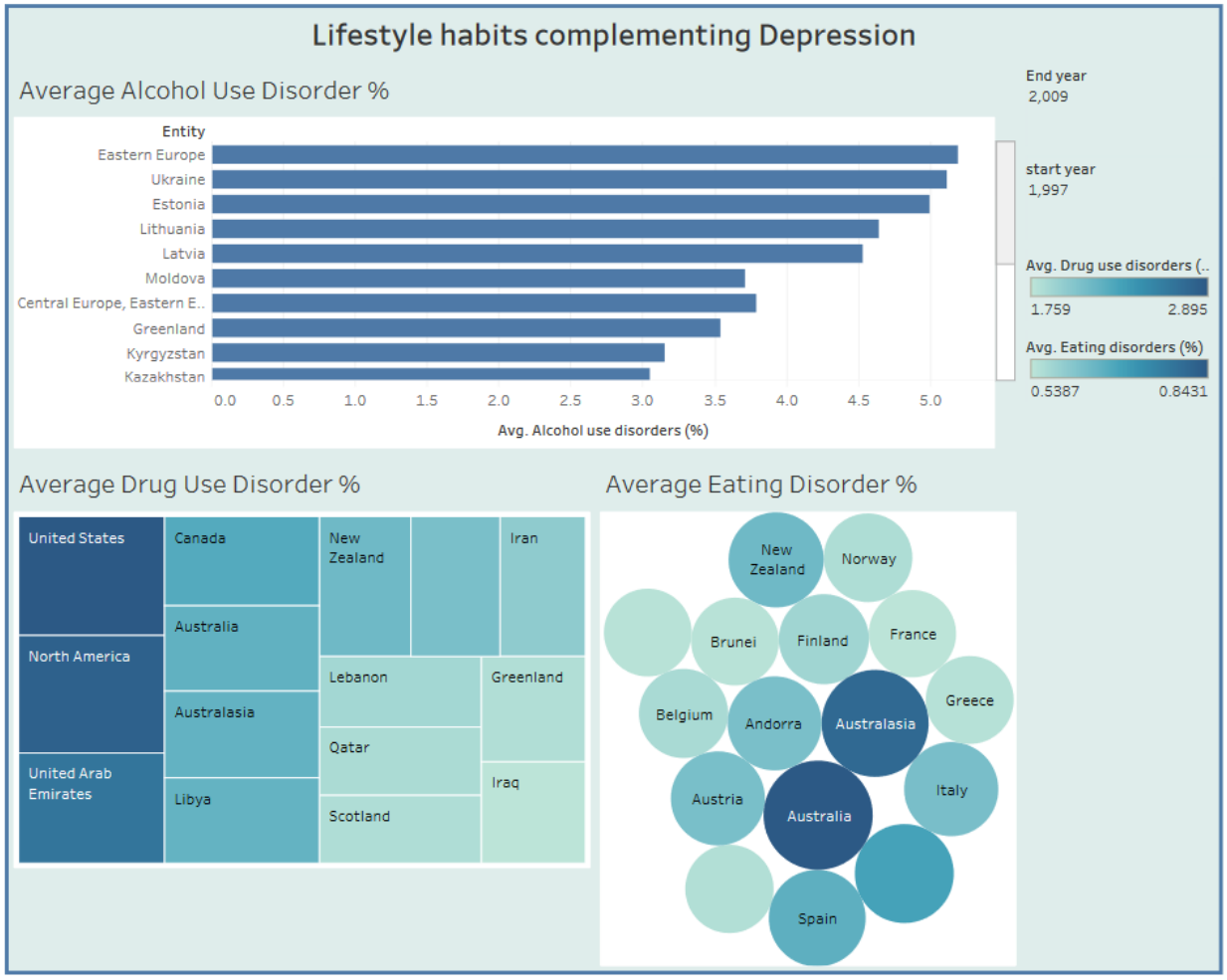



# MILESTONE 5: DASHBOARD

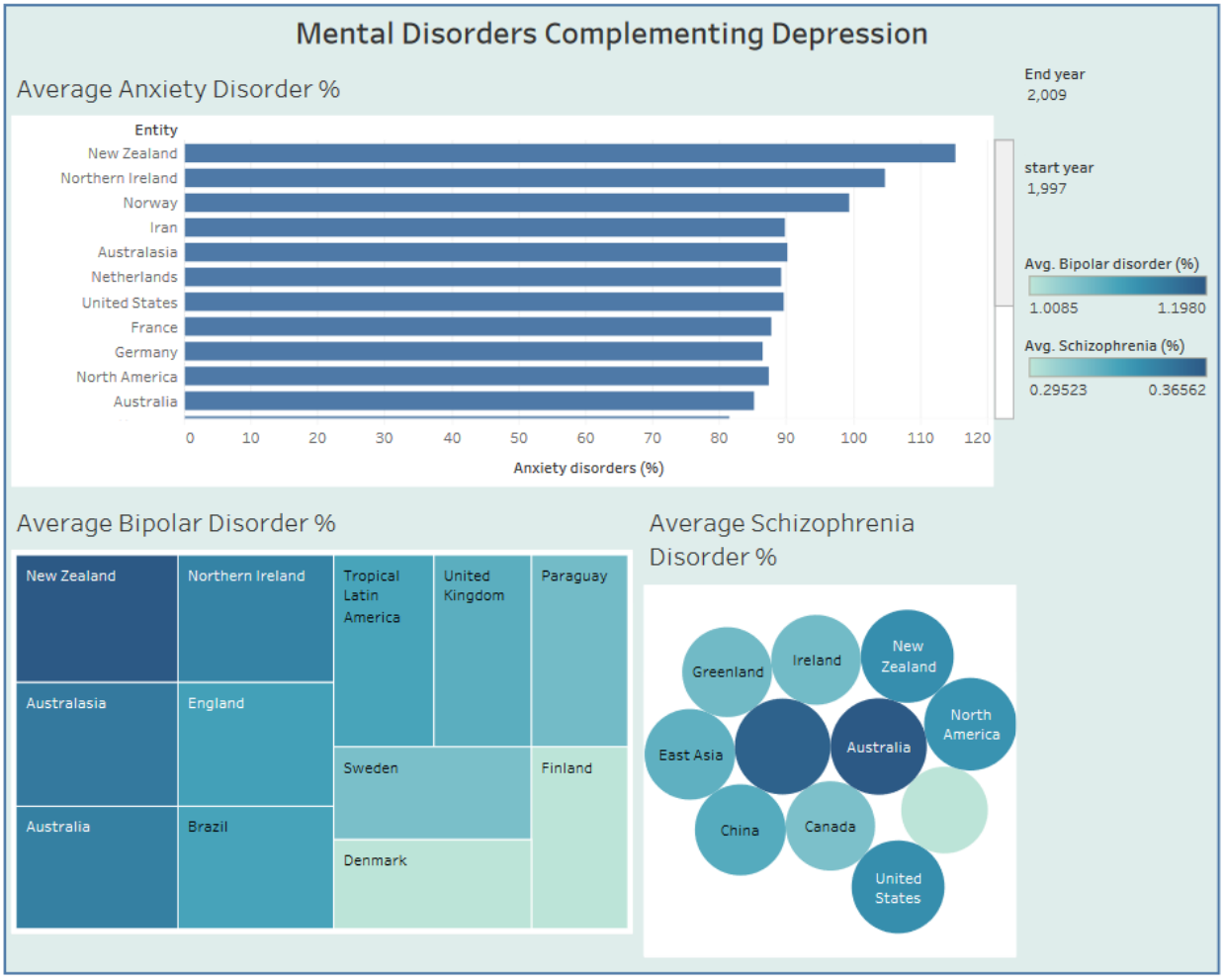
A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data and are typically designed for a specific purpose or use case. Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

## Activity 1

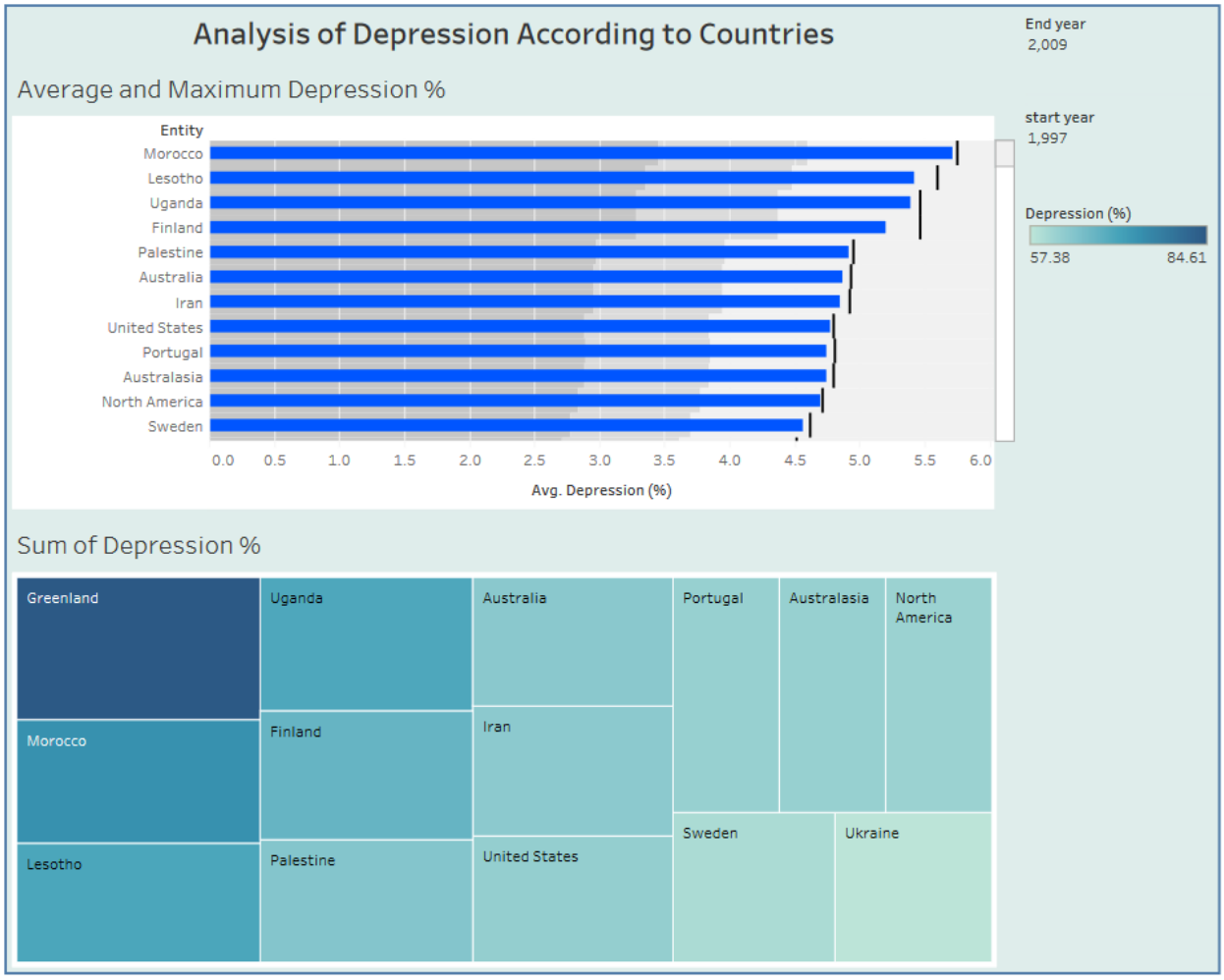
Lifestyle habits complementing depression



## Activity 2- Mental disorder complementing depression



## Activity 3- Analysis of depression according to Countries

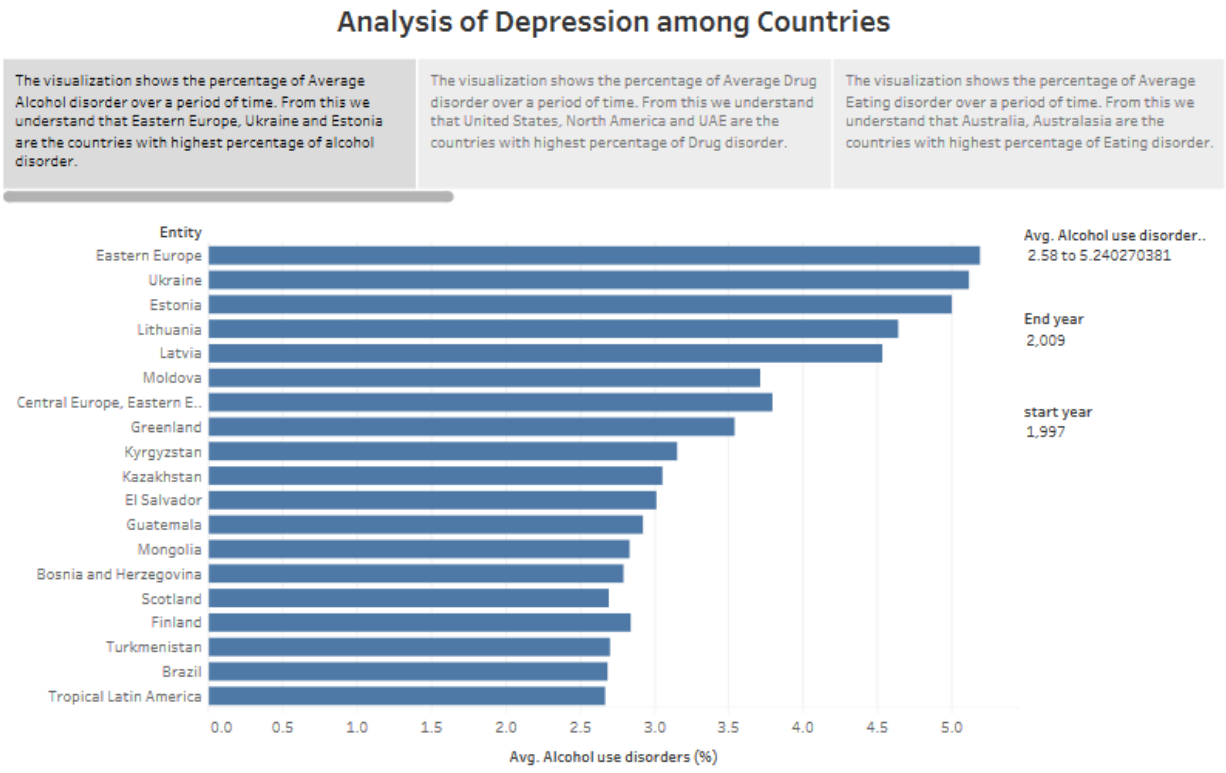



## MILESTONE 6. STORY

A data story is a way of presenting data and analysis in a narrative format, intending to make the information more engaging and easier to understand. A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis logically and systematically, and a conclusion that summarizes the key findings and highlights their implications. Data stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.

## Activity 1- No of Scenes of Story

The number of scenes in a storyboard for a data visualization analysis of the performance of banks will depend on the complexity of the analysis and the specific insights that are trying to be conveyed. A storyboard is a visual representation of the data analysis process and it breaks down the analysis into a series of steps or scenes.

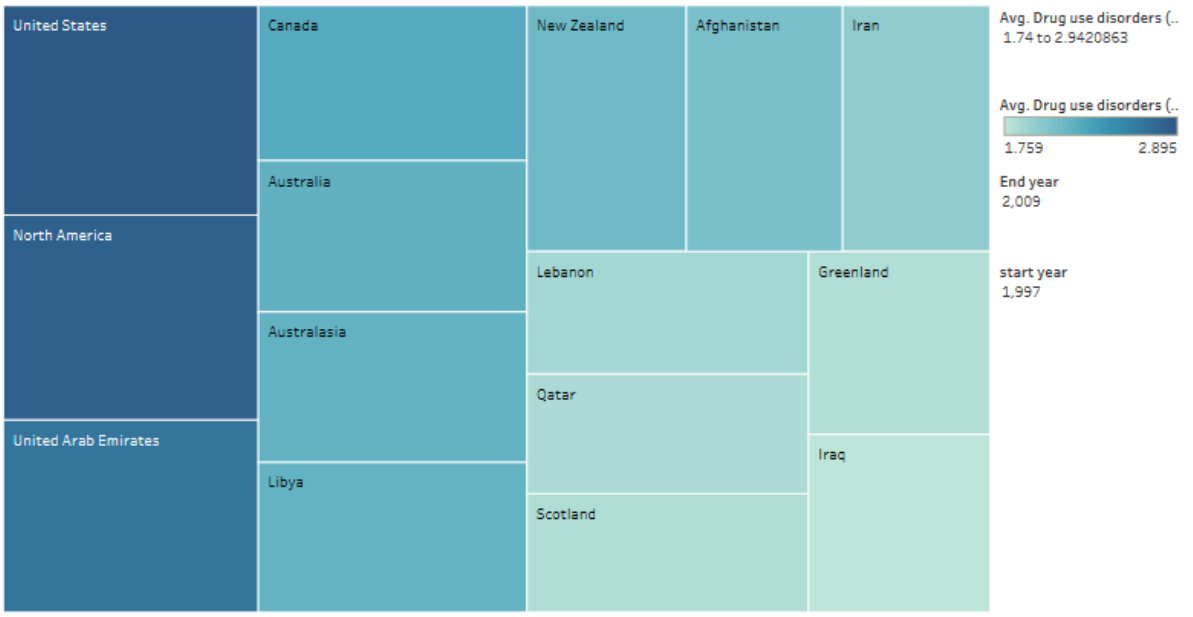


# Analysis of Depression among Countries

The visualization shows the percentage of Average Alcohol disorder over a period of time. From this we understand that Eastern Europe, Ukraine and Estonia are the countries with highest percentage of alcohol disorder.

The visualization shows the percentage of Average Drug disorder over a period of time. From this we understand that United States, North America and UAE are the countries with highest percentage of Drug disorder.

The visualization shows the percentage of Average Eating disorder over a period of time. From this we understand that Australia, Australasia are the countries with highest percentage of Eating disorder.

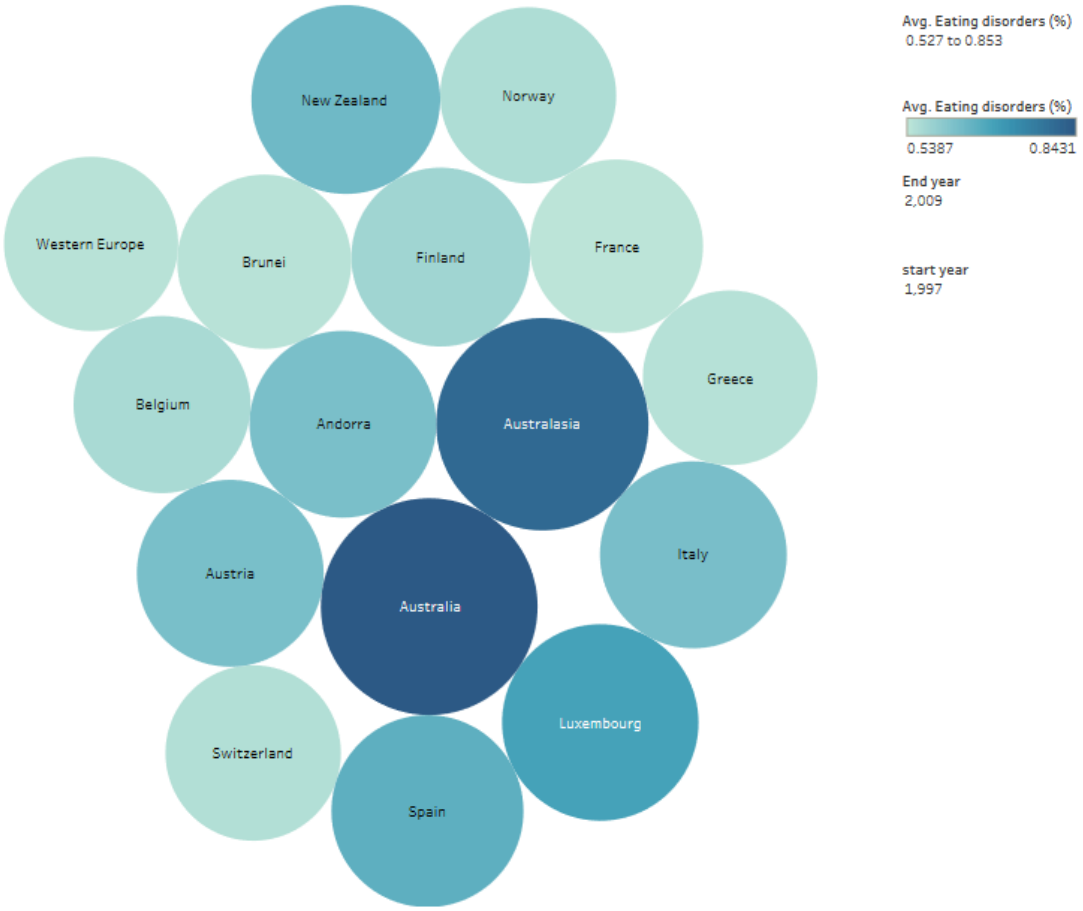


# Analysis of Depression among Countries

The visualization shows the percentage of Average Drug disorder over a period of time. From this we understand that United States, North America and UAE are the countries with highest percentage of Drug disorder.

The visualization shows the percentage of Average Eating disorder over a period of time. From this we understand that Australia, Australasia are the countries with highest percentage of Eating disorder.

The visualization shows the percentage of Average Anxiety disorder over a period of time. From this we understand that New Zealand, Northern Ireland, Norway are the countries with highest percentage of Anxiety disorder.

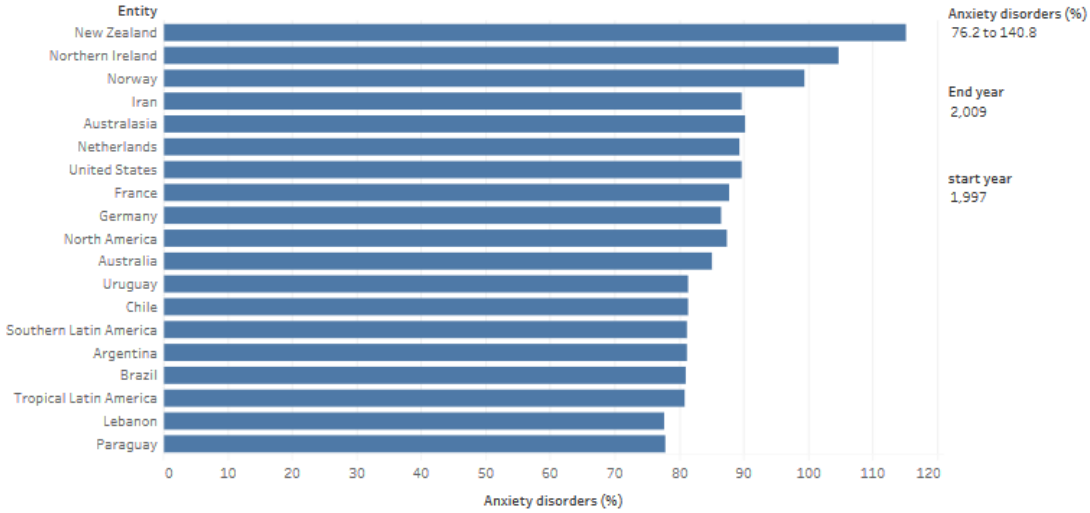


## Analysis of Depression among Countries

The visualization shows the percentage of Average Eating disorder over a period of time. From this we understand that Australia, Australasia are the countries with highest percentage of Eating disorder.

The visualization shows the percentage of Average Anxiety disorder over a period of time. From this we understand that New Zealand, Northern Ireland, Norway are the countries with highest percentage of Anxiety disorder.

The visualization shows the percentage of Average Bipolar disorder over a period of time. From this we understand that New Zealand, Australia, Australasia are the countries with highest percentage of Bipolar disorder.

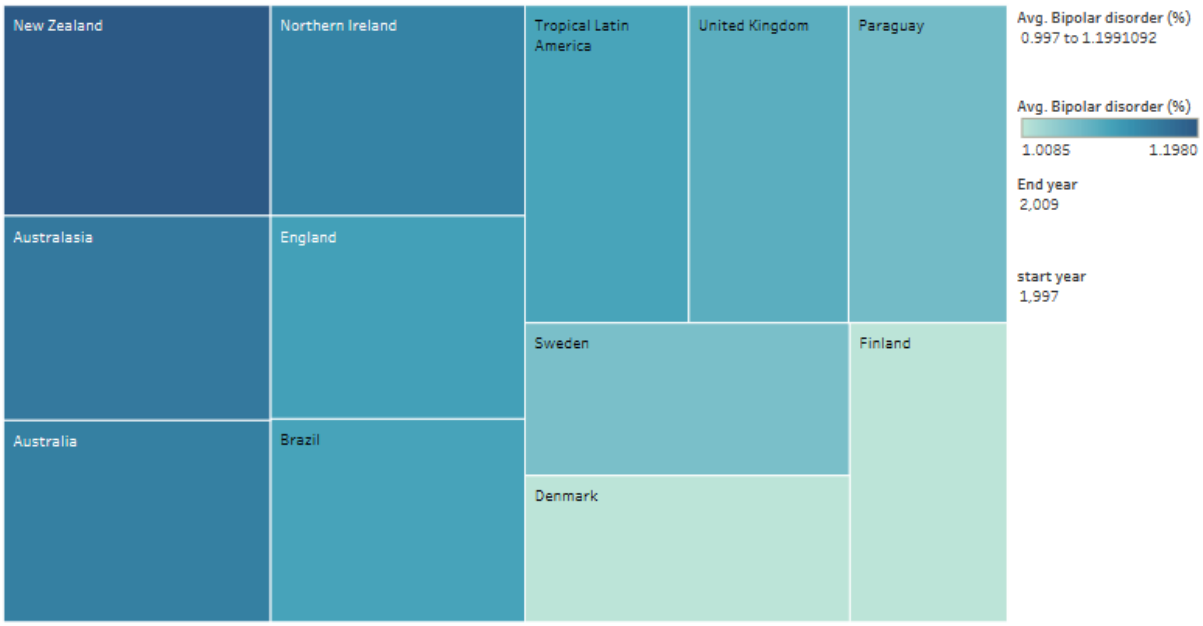



## Analysis of Depression among Countries

The visualization shows the percentage of Average Anxiety disorder over a period of time. From this we understand that New Zealand, Northern Ireland, Norway are the countries with highest percentage of Anxiety disorder.

The visualization shows the percentage of Average Bipolar disorder over a period of time. From this we understand that New Zealand, Australia, Australasia are the countries with highest percentage of Bipolar disorder.

The visualization shows the percentage of Average Schizophrenia disorder over a period of time. From this we understand that Australia, Australasia are the countries with highest percentage of Schizophrenia disorder.

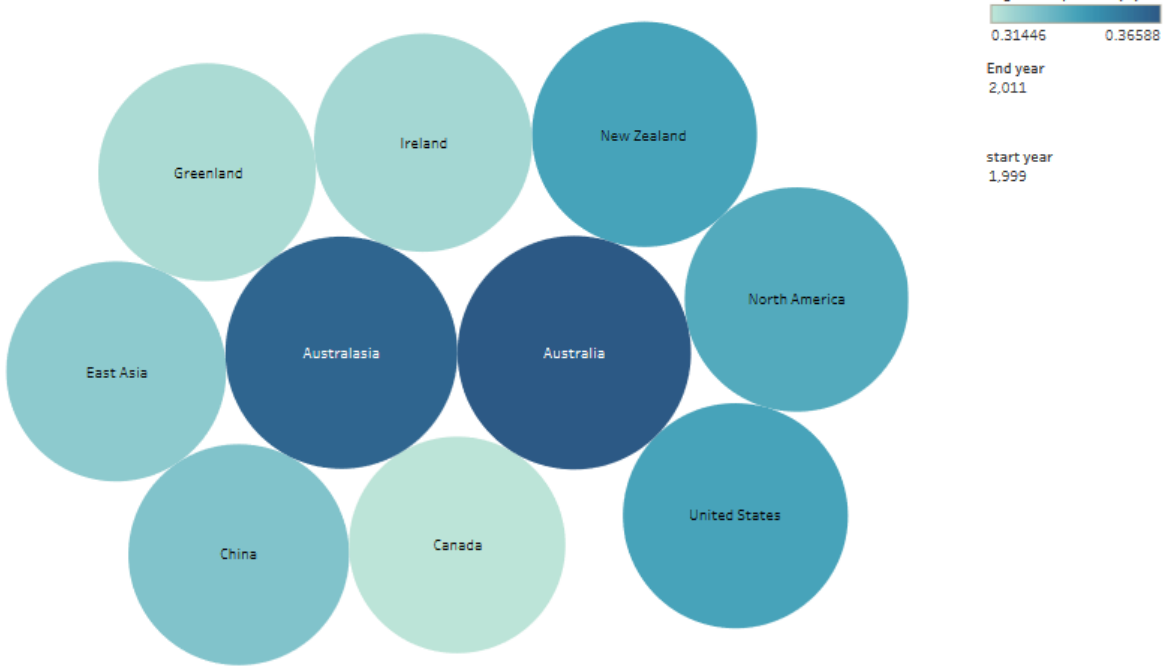


# Analysis of Depression among Countries

The visualization shows the percentage of Average Bipolar disorder over a period of time. From this we understand that New Zealand, Australia, Australasia are the countries with highest percentage of Bipolar disorder.

The visualization shows the percentage of Average Schizophrenia disorder over a period of time. From this we understand that Australia, Australasia are the countries with highest percentage of Schizophrenia disorder.

The visualization shows the percentage of Average and Maximum Depression over a period of time. From this we understand that Morocco, Lesotho and Uganda are the countries with highest percentage of Average and Maximum Depression .

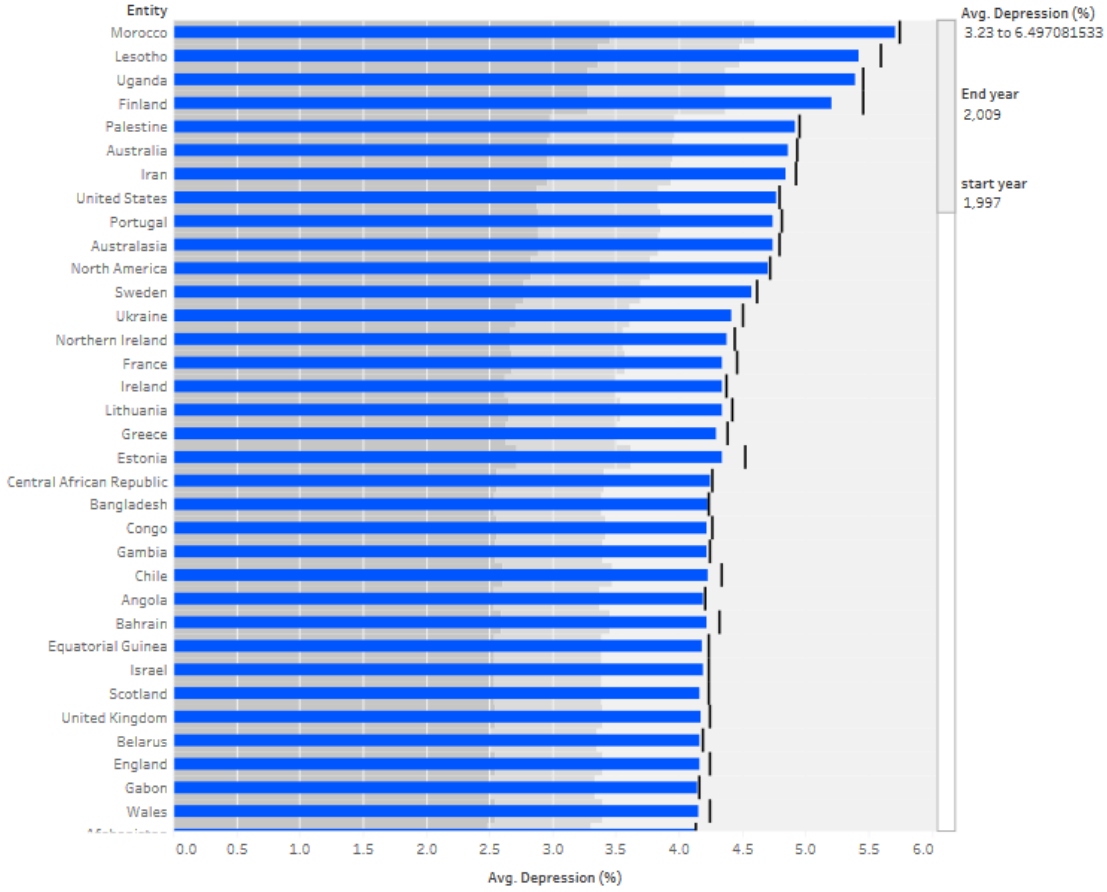


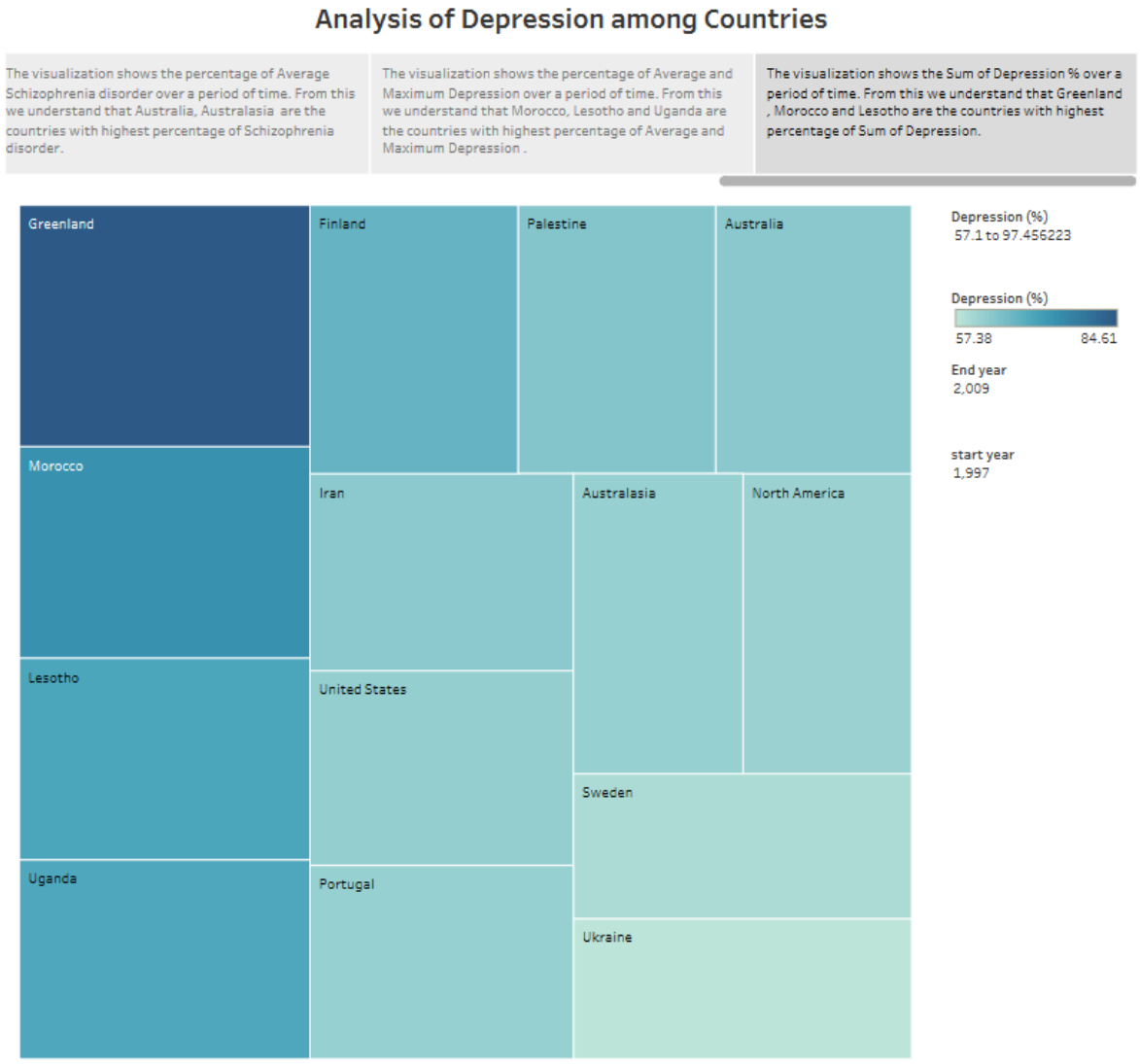
# Analysis of Depression among Countries

The visualization shows the percentage of Average Schizophrenia disorder over a period of time. From this we understand that Australia, Australasia are the countries with highest percentage of Schizophrenia disorder.

The visualization shows the percentage of Average and Maximum Depression over a period of time. From this we understand that Morocco, Lesotho and Uganda are the countries with highest percentage of Average and Maximum Depression .

The visualization shows the Sum of Depression % over a period of time. From this we understand that Greenland , Morocco and Lesotho are the countries with highest percentage of Sum of Depression.

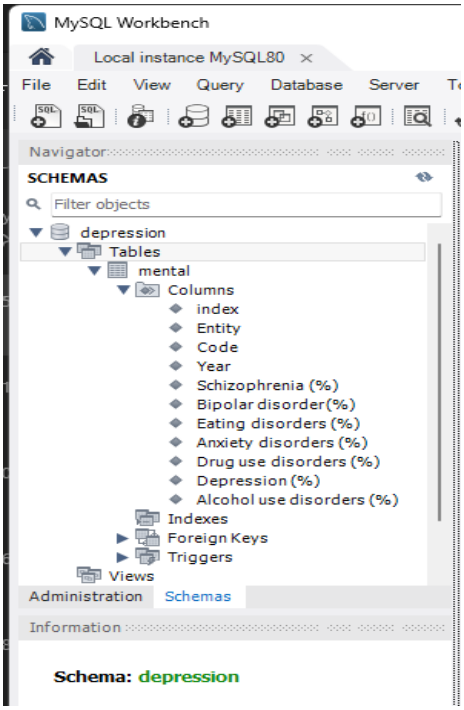





# Milestone 7: Performance Testing

## Activity 1: Amount of Data Rendered to DB

The amount of data that is rendered to a database depends on the size of the dataset and the capacity of the database to store and retrieve data.




## Activity 2: No of Calculation Fields

**Tables**

- Abc Code
- Abc Entity
- # Year
- =T|F Year_FIlter
- Abc *Measure Names*
- # Alcohol use disorders (%)
- # Anxiety disorders (%)
- # Bipolar disorder (%)
- # Depression (%)
- # Drug use disorders (%)
- # Eating disorders (%)
- # Index
- # Schizophrenia (%)
- # *mental (Count)*
- # *Measure Values*

### Activity 3: No of Visualizations/ Graphs

1. Average Alcohol Disorder %
2. Average Drug use Disorder %
3. Average Eating Disorder %
4. Average Anxiety Disorder %
5. Average Bipolar Disorder %
6. Average Schizophrenia Disorder %
7. Average and maximum Depression %
8. Sum of Depression %

## Milestone 8: Web integration

Publishing helps us to track and monitor key performance metrics and to communicate results and progress. help a publisher stay informed, make better decisions, and communicate their performance to others.

#### Integrating dashboard and reports to tableau public

Step1: Go to tableau and click on the server and publish your workbook .

Step2: entering your tableau public credentials . then sheet will be published to our tableau public account

Step 3: Copy the link and paste it in your html page.

**Web Integration :-**

Web data integration (WDI) is the process of aggregating and managing data from different websites into a single, homogeneous workflow. This process includes data access, transformation, mapping, quality assurance and fusion of data. Data that is sourced and structured from websites is referred to as "web data".

## Activity 1: Embed Dashboard & Story with Web Bootstrap

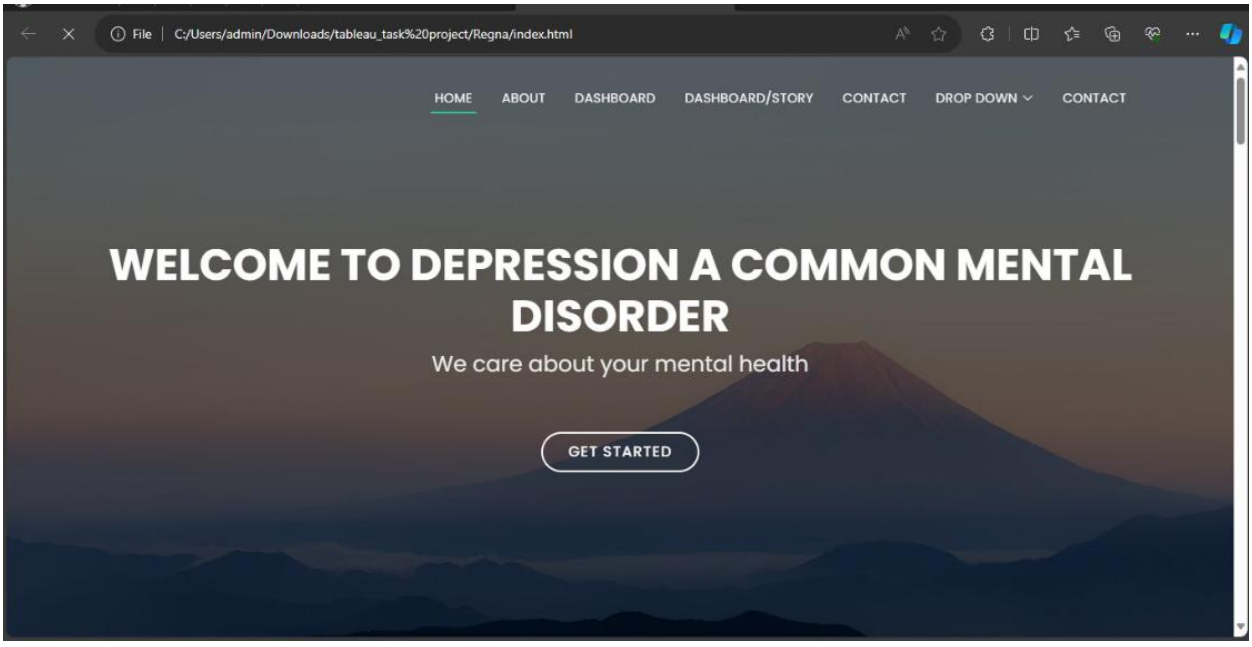
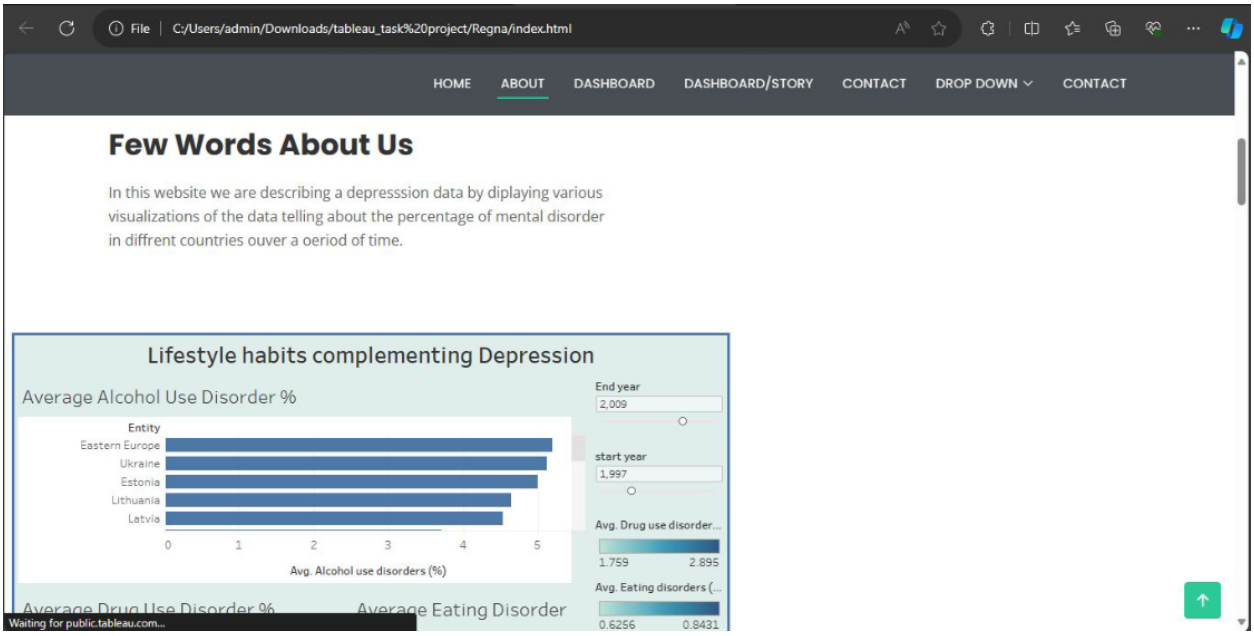
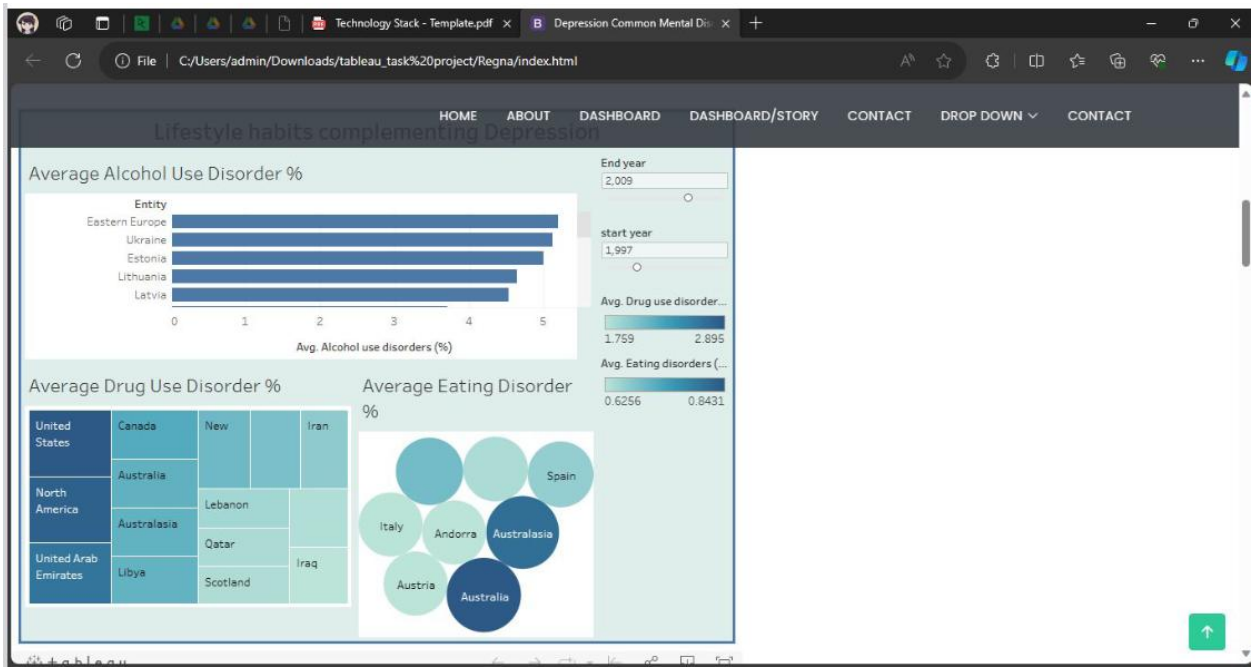
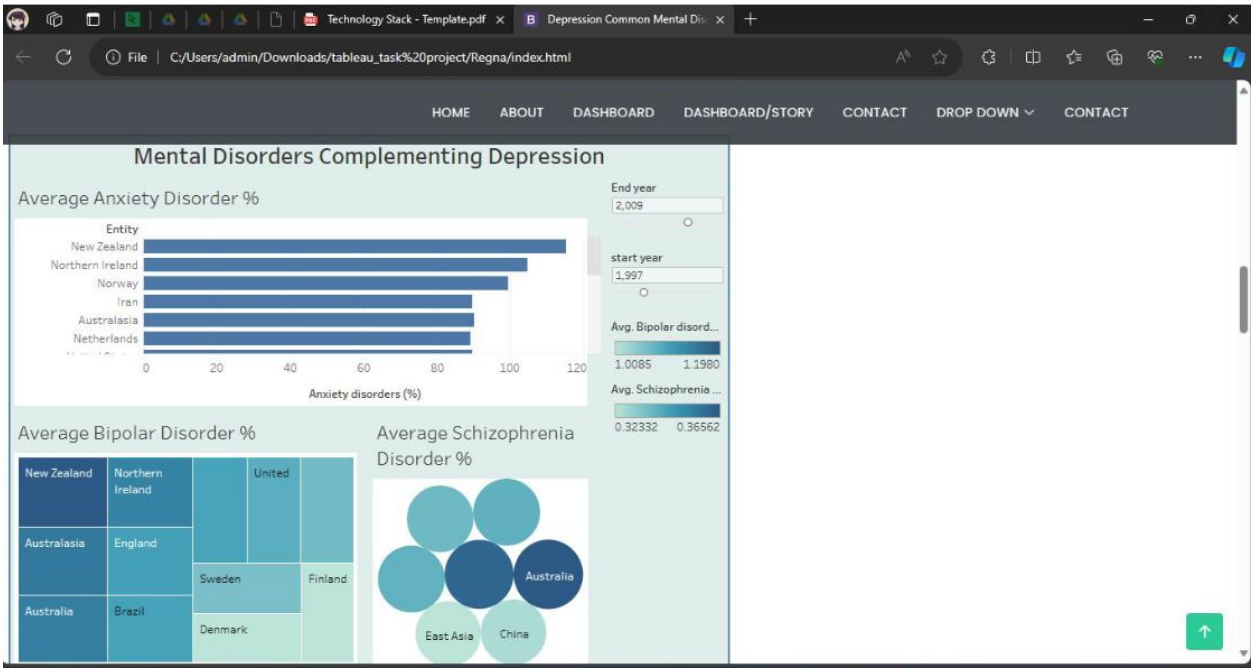
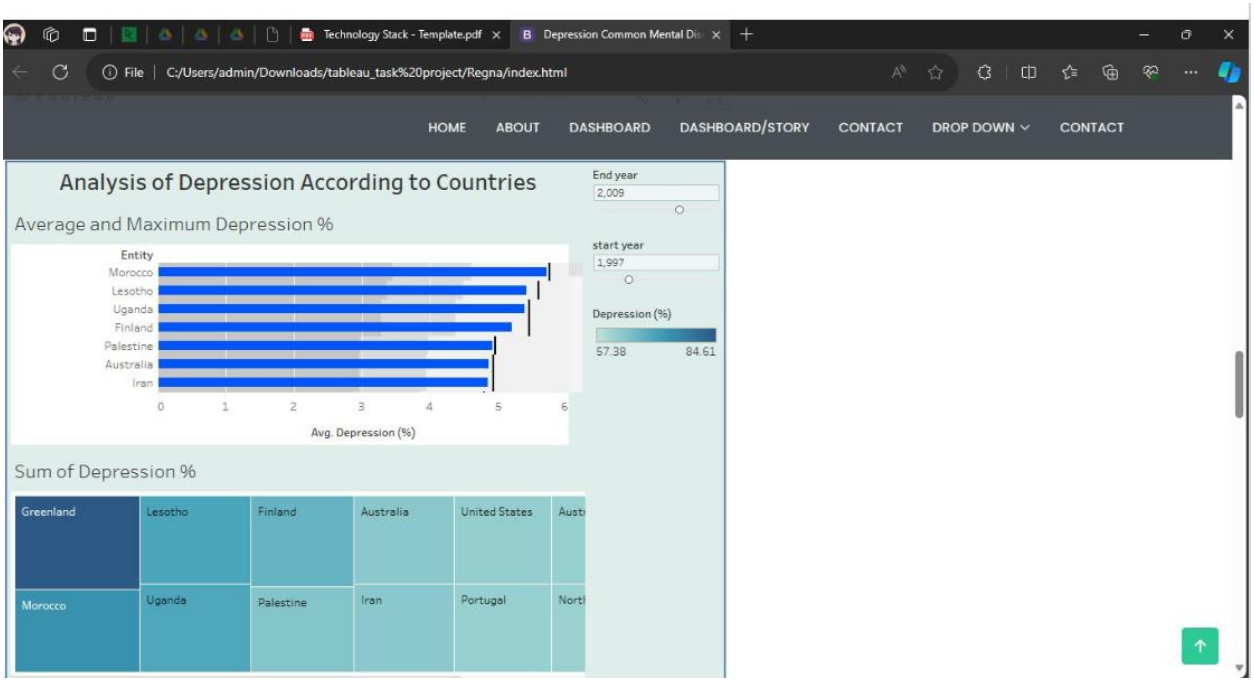


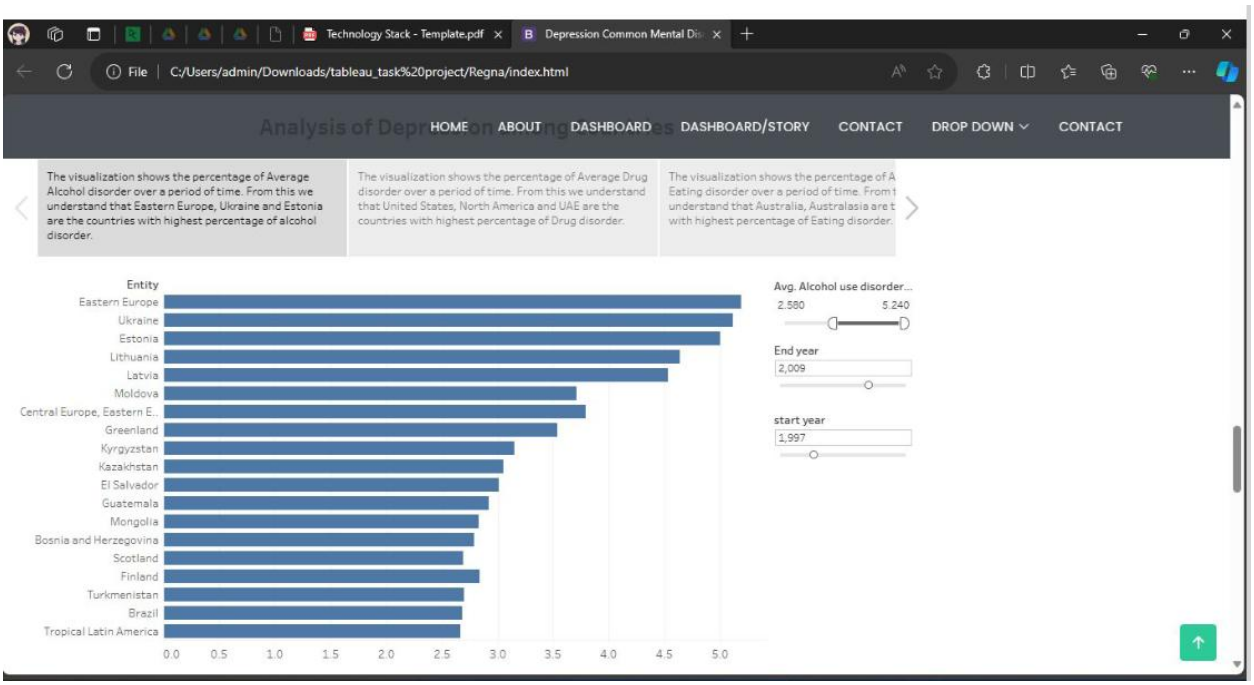
TABLEAU PUBLIC:




Technology Stack - Template.pdf
Depression Common Mental Di
File | C:/Users/admin/Downloads/tableau_task%20project/Regna/index.html
HOME
ABOUT
DASHBOARD
DASHBOARD/STORY
CONTACT
DROP DOWN
CONTACT
Mental Disorders Complementing Depression
Average Anxiety Disorder %
Entity
New Zealand
Northern Ireland
Norway
Iran
Australasia
Netherlands
0
20
40
60
80
100
120
Anxiety disorders (%)
End year
2,009
start year
1,997
Avg. Bipolar disord...
1.0085
1.1980
Avg. Schizophrenia ...
0.32332
0.36562
Average Bipolar Disorder %
New Zealand
Northern Ireland
United
Australasia
England
Sweden
Finland
Australia
Brazil
Denmark
Average Schizophrenia Disorder %
Australia
East Asia
China


Technology Stack - Template.pdf
Depression Common Mental Di
File | C:/Users/admin/Downloads/tableau_task%20project/Regna/index.html
HOME
ABOUT
DASHBOARD
DASHBOARD/STORY
CONTACT
DROP DOWN
CONTACT
Analysis of Depression According to Countries
Average and Maximum Depression %
Entity
Morocco
Lesotho
Uganda
Finland
Palestine
Australia
Iran
0
1
2
3
4
5
6
Avg. Depression (%)
End year
2,009
start year
1,997
Depression (%)
57.38
84.61
Sum of Depression %
Greenland
Lesotho
Finland
Australia
United States
Morocco
Uganda
Palestine
Iran
Portugal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Depression Common Mental Dis
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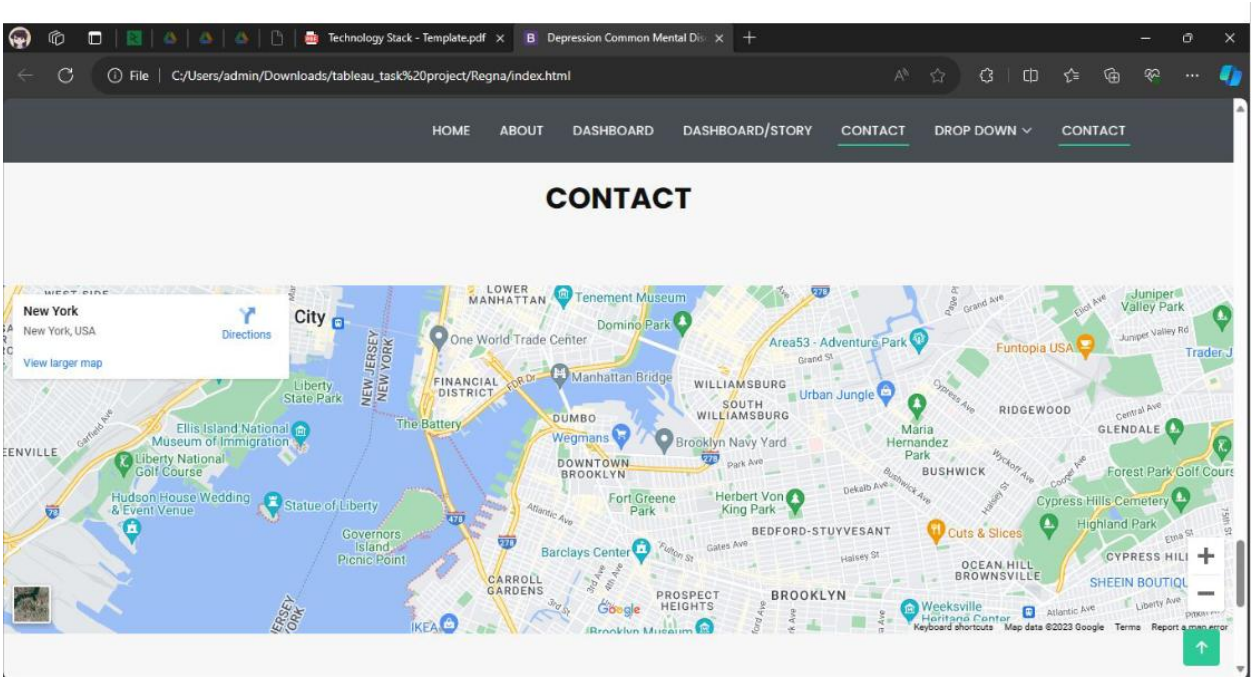
The visualization shows the percentage of Average Alcohol disorder over a period of time. From this we understand that Eastern Europe, Ukraine and Estonia are the countries with highest percentage of alcohol disorder.
The visualization shows the percentage of Average Drug disorder over a period of time. From this we understand that United States, North America and UAE are the countries with highest percentage of Drug disorder.
Entity
Eastern Europe
Ukraine
Estonia
Lithuania
Latvia
Moldova
Central Europe, Eastern E...
Greenland
Kyrgyzstan
Kazakhstan
El Salvador
Guatemala
Mongolia
Bosnia and Herzegovina
Scotland
Finland
Turkmenistan
Brazil
Tropical Latin America
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
Avg. Alcohol use disorder...
2.580
5.240
End year
2,009
start year
1,997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New York, USA
Directions
View larger map
City
LOWER MANHATTAN
Tenement Museum
Domino Park
One World Trade Center
Area53 - Adventure Park
Funtopia USA
Juniper Valley Park
Manhattan Bridge
FINANCIAL DISTRICT
WILLIAMSBURG
SOUTH WILLIAMSBURG
Urban Jungle
RIDGEWOOD
GLENDALE
Liberty State Park
The Battery
DUMBO
Wegmans
Brooklyn Navy Yard
Maria Hernandez Park
Ellis Island National Museum of Immigration
Liberty National Golf Course
DOWNTOWN BROOKLYN
BUSHWICK
Forest Park Golf Cours
Hudson House Wedding & Event Venue
Statue of Liberty
Fort Greene Park
Herbert Von King Park
Cypress Hills Cemetery
Highland Park
BEDFORD-STUYVESANT
Cuts & Slices
Governors Island Picnic Point
Barclays Center
OCEAN HILL BROWNSVILLE
CARROLL GARDENS
PROSPECT HEIGHTS
BROOKLYN
Weeksville Heritage Center
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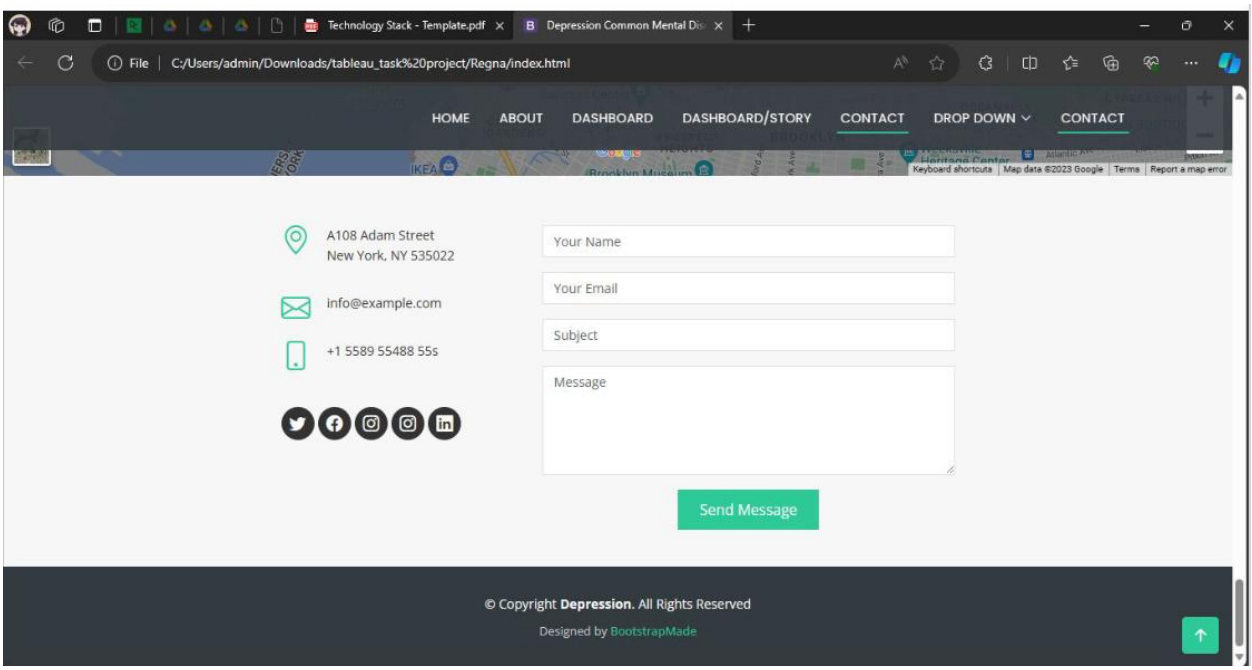
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