

# DATA ANALYTICS

- USING TABLEAU

*PROJECT TITLE:*

*SUICIDES IN INDIA –*

*A VISUALIZATIONS USING TABLEAU*

## TEAM MEMBERS

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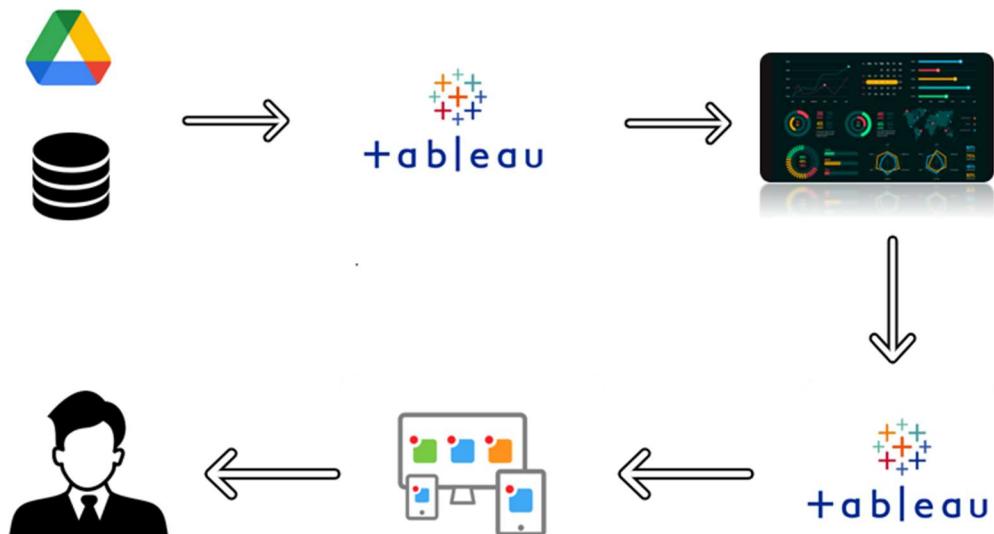
# Suicides in india : A Visualization using Tableau

Suicide in India is a significant public health concern, with a rate of 10.4 per 100,000 people in 20. Men account for a majority of suicides, and common reasons include family issues, illness, and mental health disorders. Prevention efforts should focus on mental health awareness and access to services.

The project is majorly distributed into 4 parts:

1. Downloading the data set and loading it in Tableau.
2. Plotting the data using different types of options available.
3. Altering the visualizations to make them meaningful using the features available in Tableau.
4. Exploring features like forecasting without writing codes the way you need to do in ML.

## Technical Architecture:



## **Project Flow**

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

- Define Problem / Problem Understanding
  - Specify the business problem
  - Business requirements
  - Literature Survey
  - Social or Business Impact.
- Data Collection & Extraction from Database
  - Collect the dataset,
  - Storing Data in DB
  - Perform SQL Operations
  - Connect DB with Tableau
- Data Preparation
  - Prepare the Data for Visualization
- Data Visualizations
  - No of Unique Visualizations
- Dashboard
  - Responsive and Design of Dashboard
- Story
  - No of Scenes of Story
- Performance Testing
  - Amount of Data Rendered to DB '
  - No of Calculation Fields
  - No of Visualizations/ Graphs
- Web Integration
  - Dashboard and Story embed with UI With Flask

## **Milestone 1: Define Problem / Problem Understanding**

### **Activity 1: Specify the business problem**

Refer Project Description

### **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.

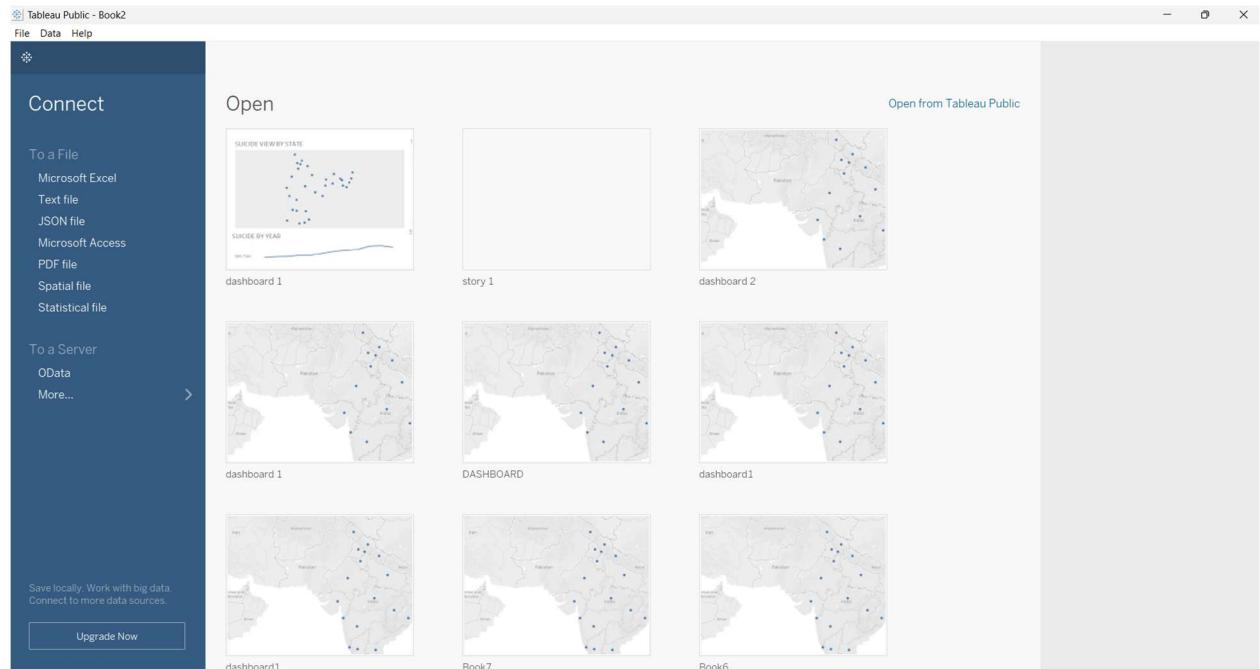
## **Milestone 2: Data Collection & Extraction from Database**

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 : 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.

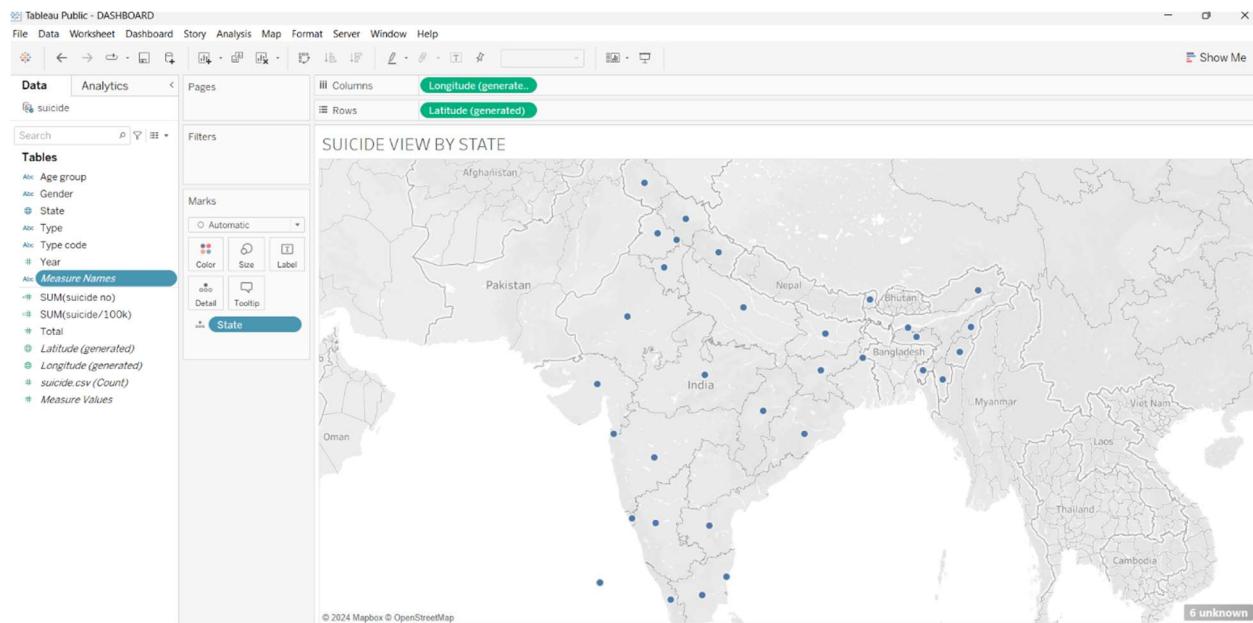
## **Milestone 4: Data Visualization**

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.

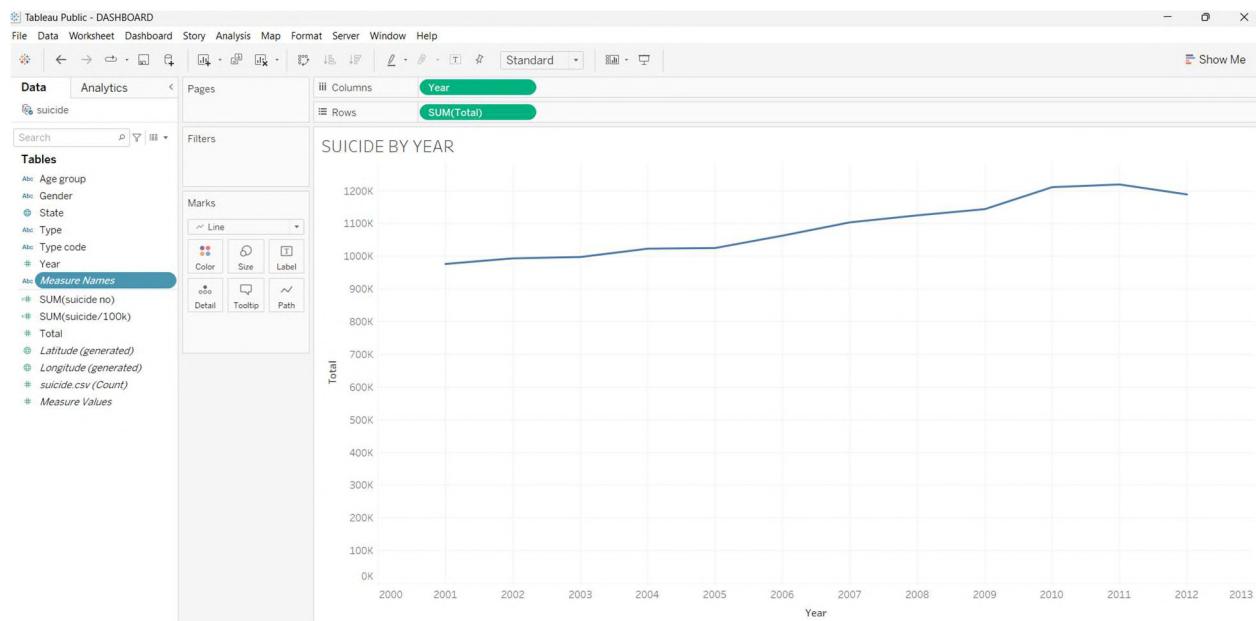
### **Activity 1: No of Unique Visualizations**

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.

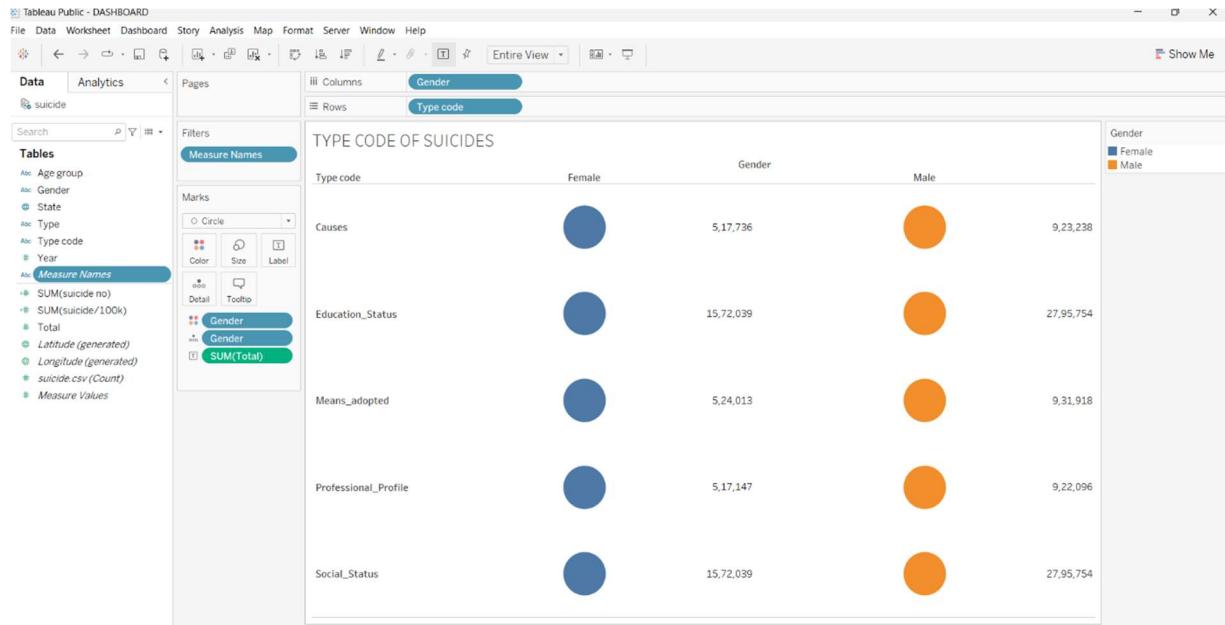
## Activity 1.1 : STATE WISE SUICIDES VISUALIZATION IN MAP



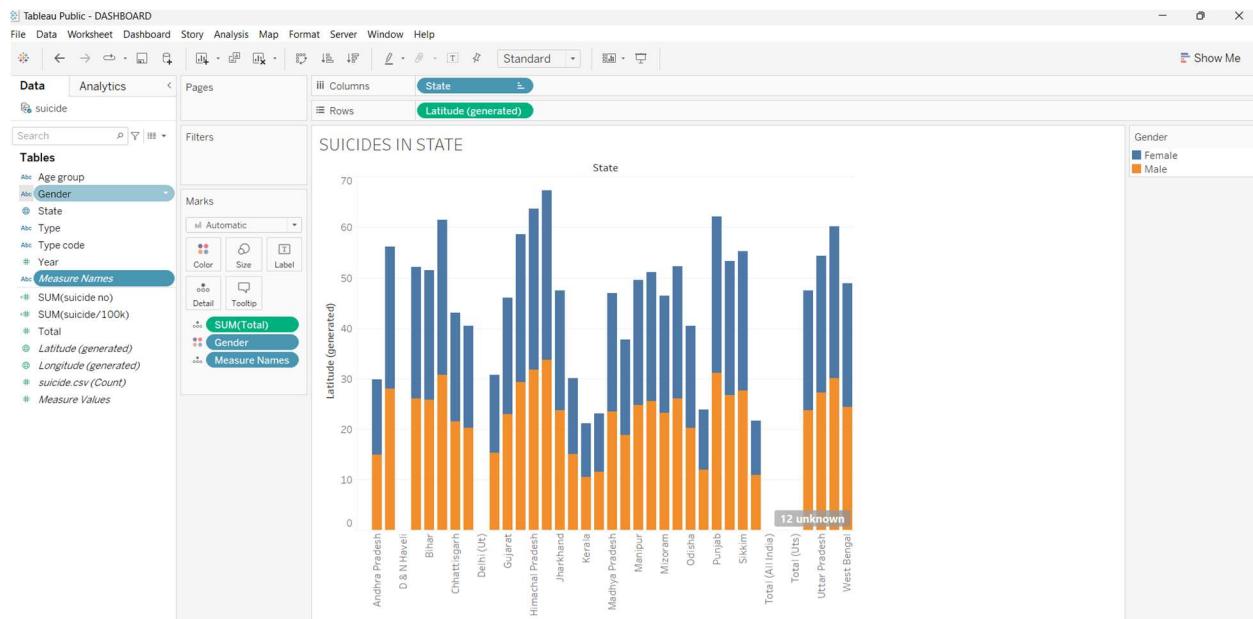
## Activity 1.2: RELATIONSHIP BETWEEN YEARS AND SUICIDE CASES COUNT



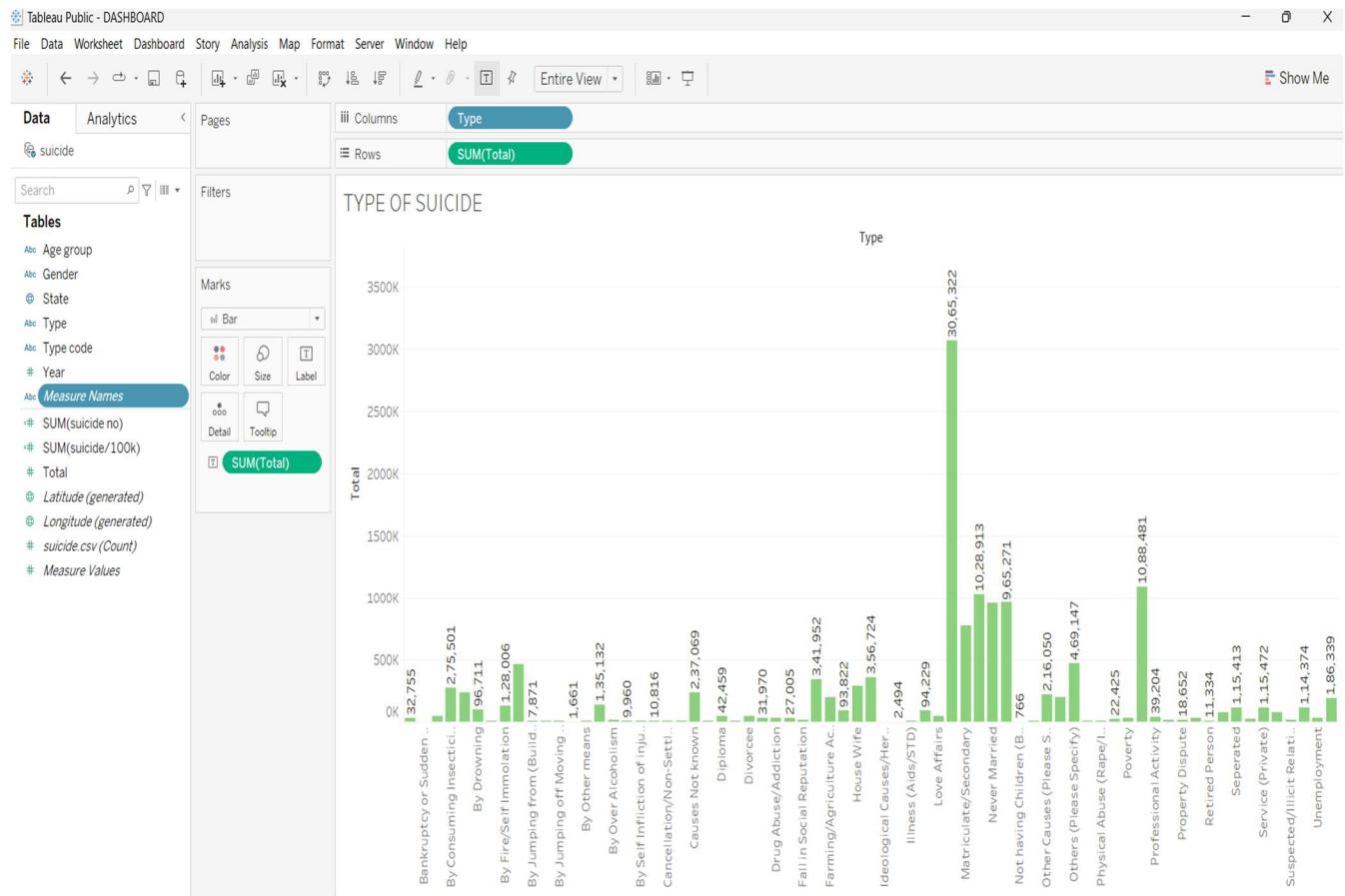
## Activity 1.3: GENDER WISE VISUALIZATION WITH TYPE CODE



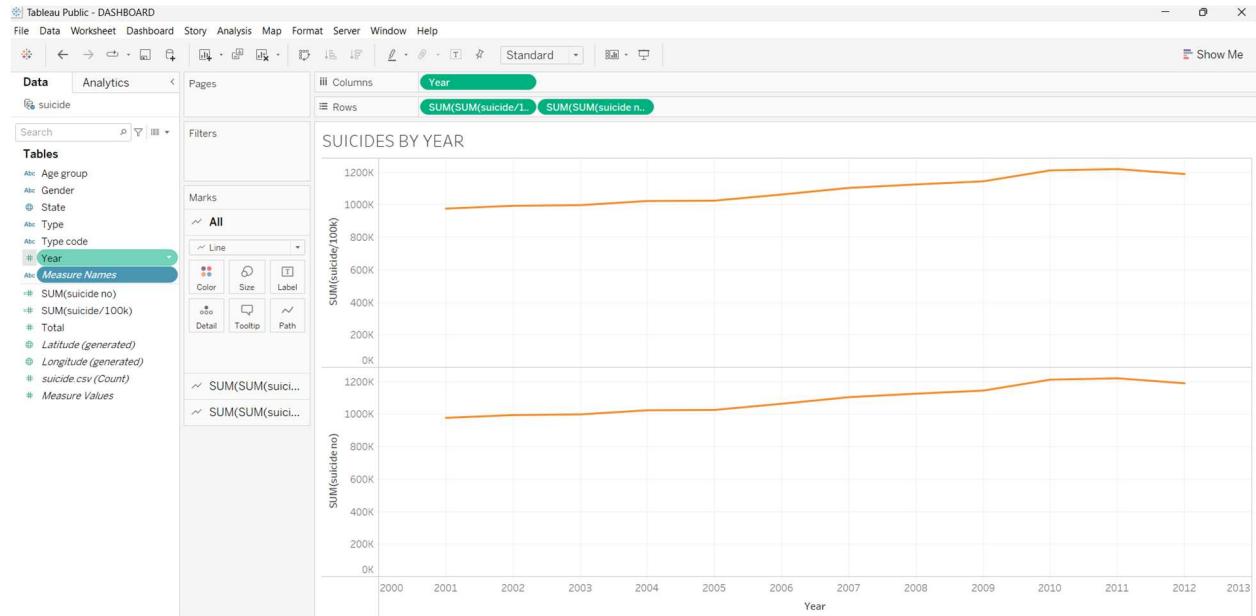
## Activity 1.4: SUICIDES IN EACH STATE OVER THE COURSE OF 12 YEARS



## Activity 1.5: TYPE OF SUICIDE



## Activity 1.6: SUICIDES BY YEAR WISE



## **Milestone 5: Dashboard**

A user interface or web page that gives a current summary, usually in graphic, easy-to-read form, of key information relating to progress and performance, especially of a business or website: Our managers use an interactive dashboard to monitor employee data. The project dashboard shows all tasks assigned to your team.

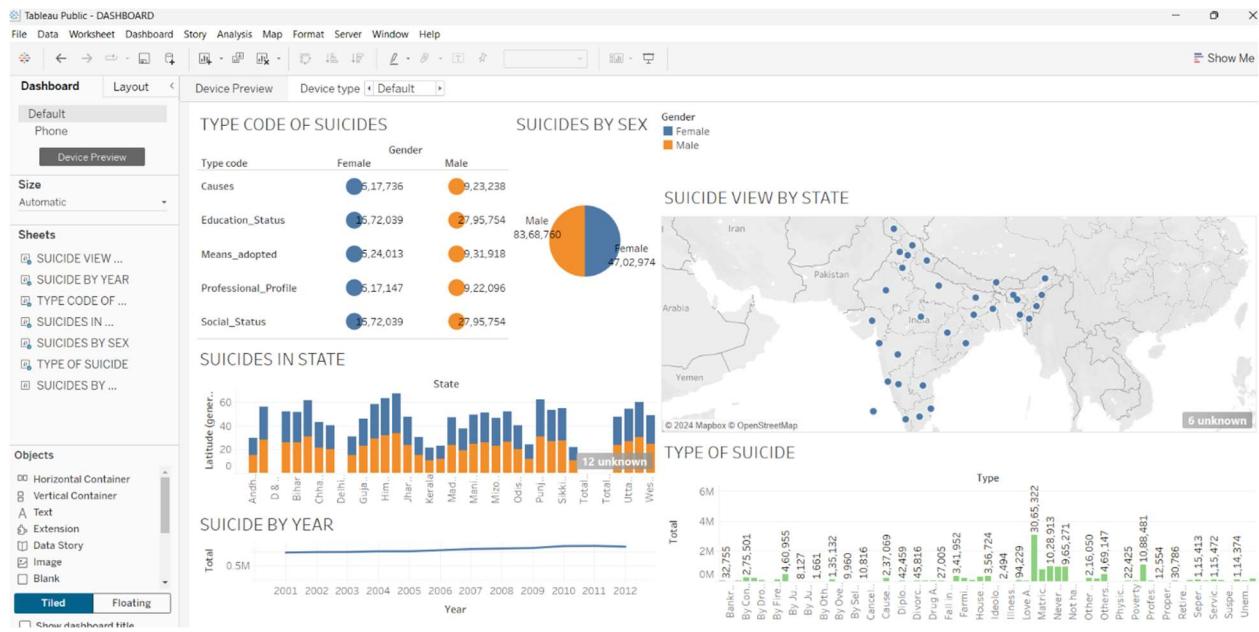
In computer information systems, a dashboard is a type of graphical user interface which often provides at-a-glance views of data relevant to a particular objective or process through a combination of visualizations and summary information.

### **Activity 1: Creating a dashboard**

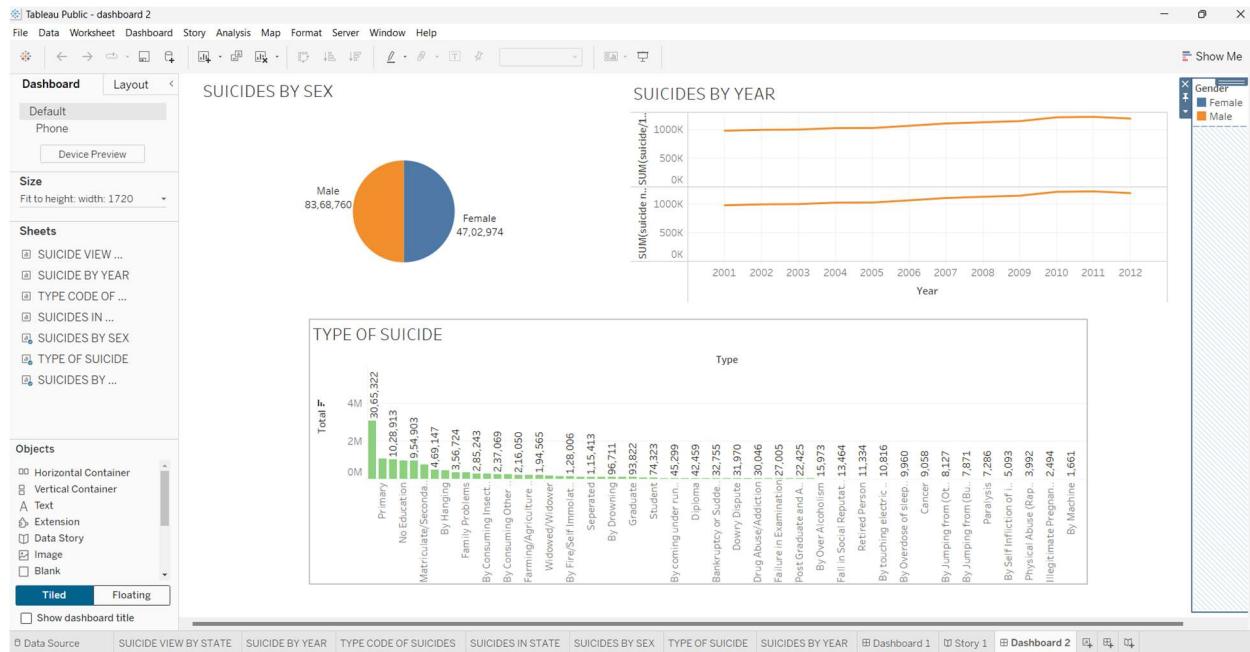
#### **Dashboard Design:**

- Starting by adding a new dashboard from the dashboard table in tableau
- Drag the visualization you create earlier onto the dashboard canvas.
- Arrange the visualization in a logical, consider factors such as hierarchy flow and emphasis on key metrics.
- Add text boxes, titles and annotation to provide context and insights.
- Publish to tableau serve or tableau public to share it with others.
- Share the dashboard URL or embed it in website or presentation as needed.

**By these steps we can create an information & visuals appealing dashboards in tableau on suicides in India . providing valuable insights into this**



Once you have created views on different sheets in Tableau, you can pull them into a dashboard



## **Milestone 6: Story**

Creating a story in tableau on suicides in India involves crafting a narrative using a series of related visualizations to convey insight and trends effectively.

A Tableau story narrates key insights to answer a data question via a series of logically connected visuals. We build Tableau stories using a collection of sheets in a Tableau workbook called story.

A data story is a way of presenting data and analysis in a narrative format, with the goal of making 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 in a logical and systematic way.

## Activity 1: Creating a story

- Go to the story tab in tableau and click on “new story” to create a new story.
- Add a title and description to introduce the topic of the story.
- Add “Dashboard” object to the story selecting the relevant dashboard are individual visualization created earlier.
- Use story telling techniques such as highlighting.



## Milestone 7: Publishing and web integration

Publishing help us to track and monitor key performance metrics to communicate result and program. help a publisher stay informed, make better decision, and communicate their performance to others.

## Activity 1: Publishing dashboard and reports to tableau public

Step 1: Go to Dashboard/story, click on share button on the top ribbon



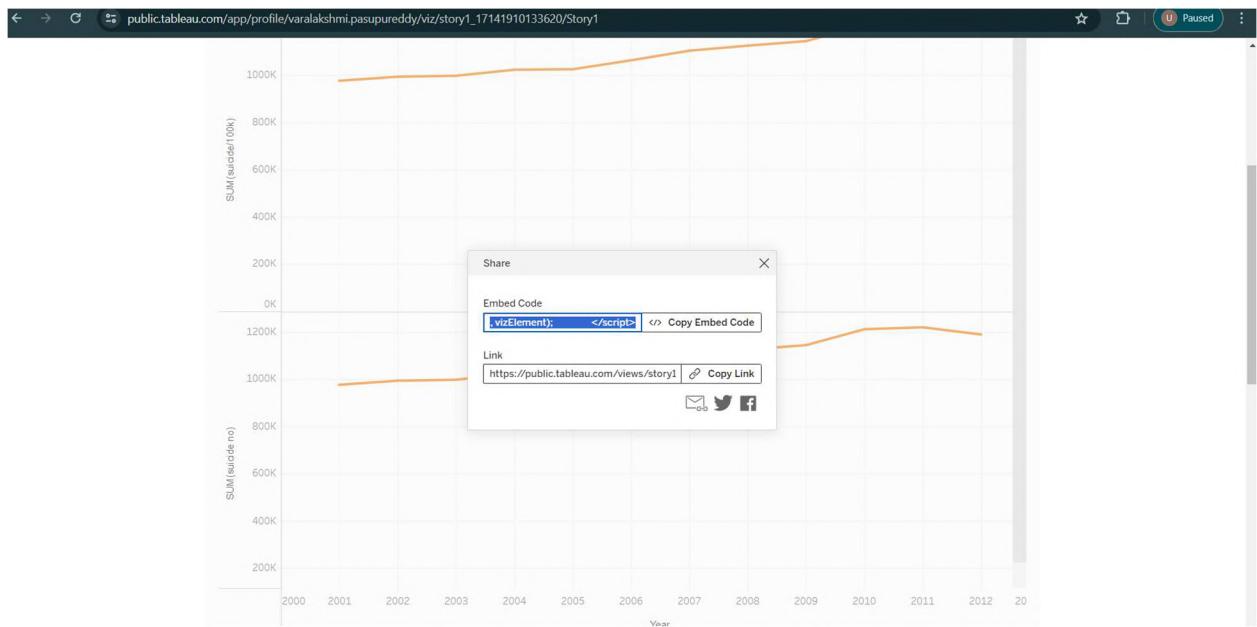
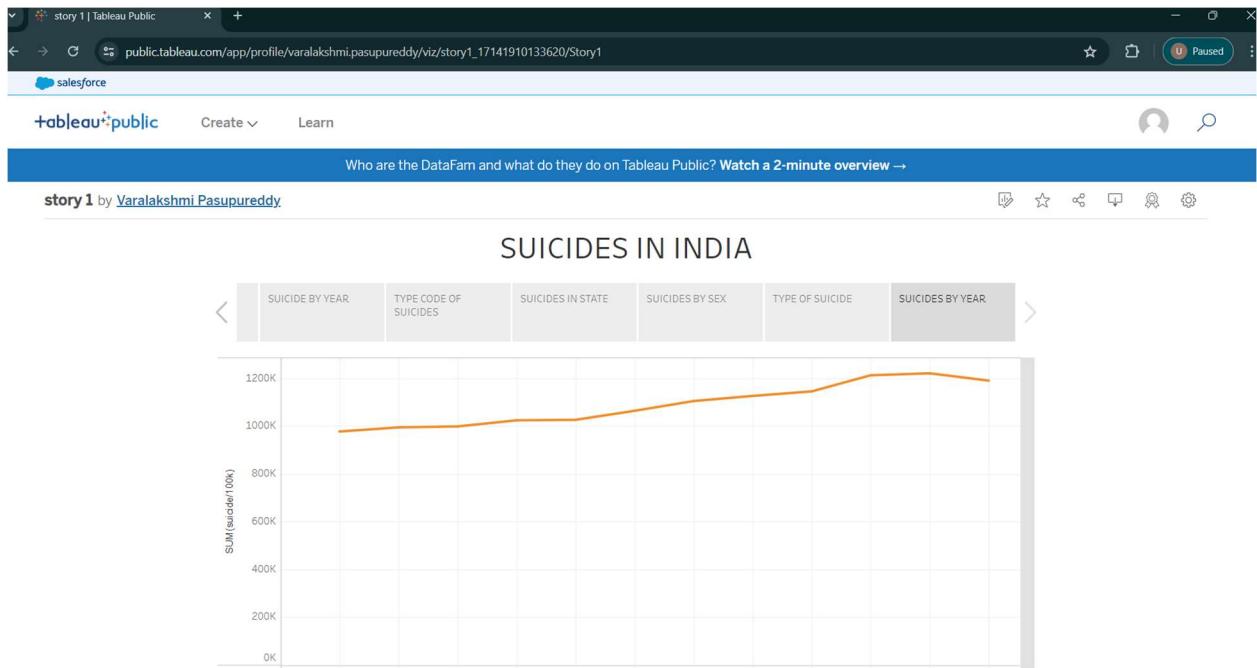
Give the server address of your tableau public account and click on connect.

Step 2: Once you click on connect it will ask you for tableau public user name and password



Once you login into your tableau public using the credentials, the particular visualization will be published into tableau public

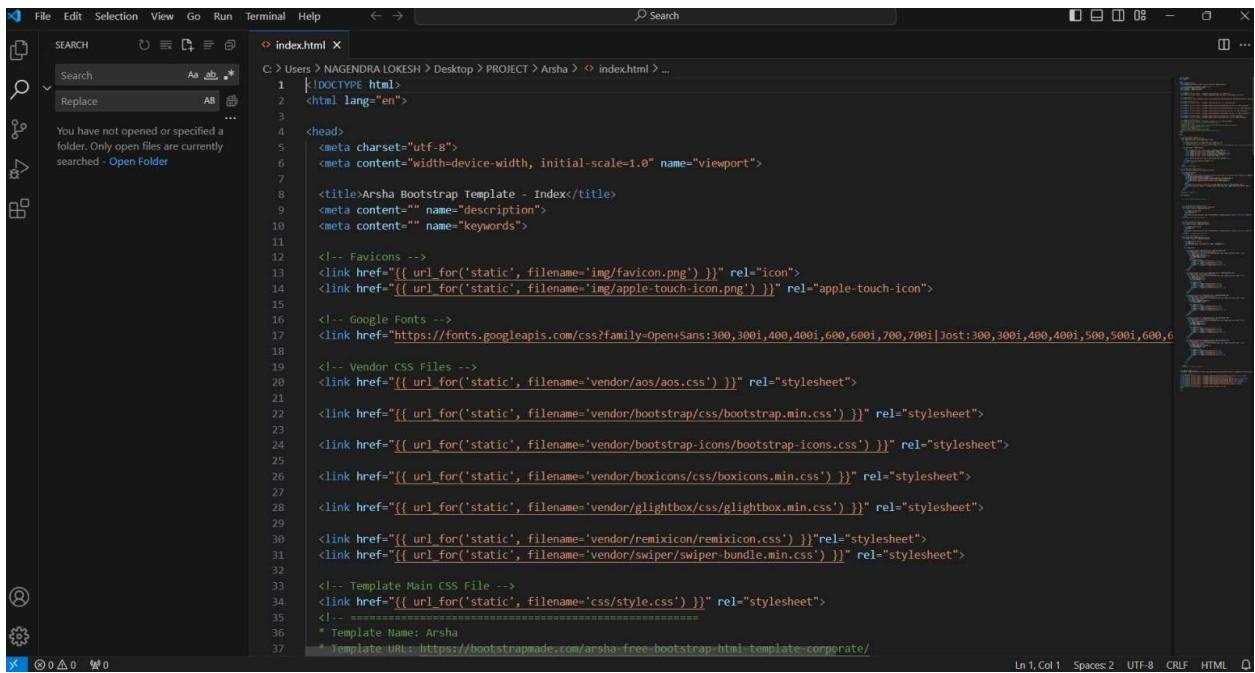
## Activity 2 : Integrating with web with Embed code



## Activity 2: web integration

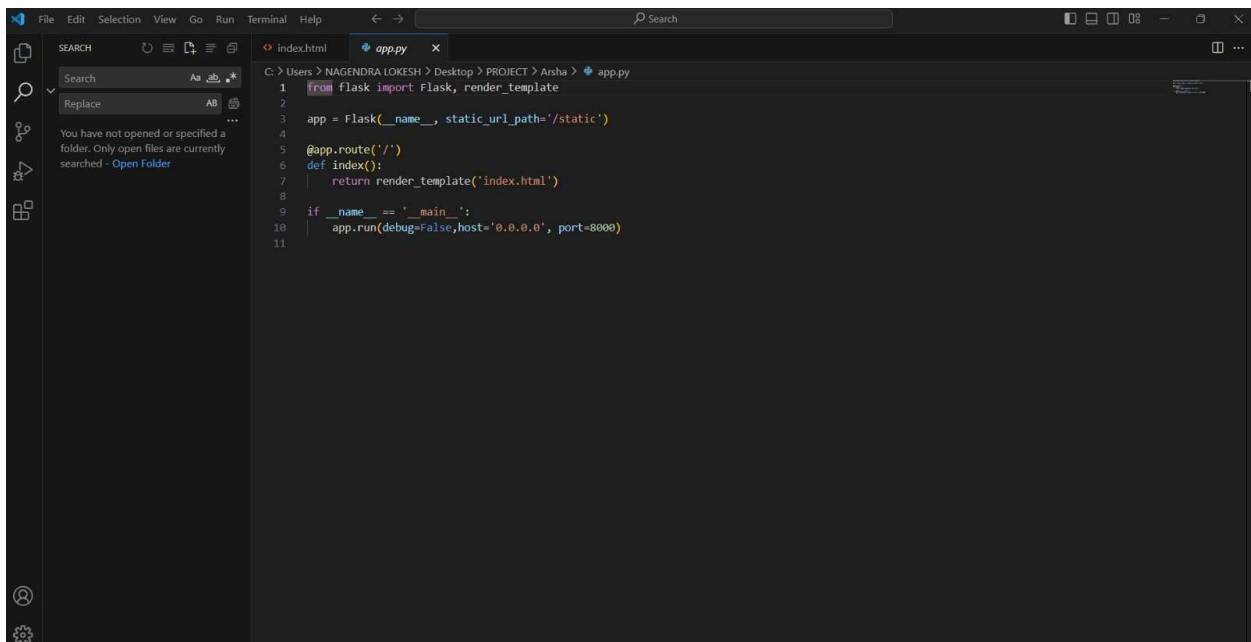
To integrate tableau visualizations, such as dashboards and stories into a website it involves embedding the visualizations using HTML and JavaScript and Flask Code of python.

### Creating website:



```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <meta content="width=device-width, initial-scale=1.0" name="viewport">
    <title>Arsha Bootstrap Template - Index</title>
    <meta content="" name="description">
    <meta content="" name="keywords">
<!-- Favicons -->
<link href="{{ url_for('static', filename='img/favicon.png') }}" rel="icon">
<link href="{{ url_for('static', filename='img/apple-touch-icon.png') }}" rel="apple-touch-icon">
<!-- Google Fonts -->
<link href="https://fonts.googleapis.com/css?family=Open+Sans:300,300i,400,400i,600,600i,700,700i|Jost:300,300i,400,400i,500,500i,600,600i" rel="stylesheet">
<!-- Vendor CSS Files -->
<link href="{{ url_for('static', filename='vendor/aos-aos.css') }}" rel="stylesheet">
<link href="{{ url_for('static', filename='vendor/bootstrap/css/bootstrap.min.css') }}" rel="stylesheet">
<link href="{{ url_for('static', filename='vendor/bootstrap-icons/bootstrap-icons.css') }}" rel="stylesheet">
<link href="{{ url_for('static', filename='vendor/boxicons/css/boxicons.min.css') }}" rel="stylesheet">
<link href="{{ url_for('static', filename='vendor/lightbox/css/lightbox.min.css') }}" rel="stylesheet">
<link href="{{ url_for('static', filename='vendor/remixicon/remixicon.css') }}" rel="stylesheet">
<link href="{{ url_for('static', filename='vendor/swiper/swiper-slide.min.css') }}" rel="stylesheet">
<!-- Template Main CSS File -->
<link href="{{ url_for('static', filename='css/style.css') }}" rel="stylesheet">
<!-- ===== -->
/* Template Name: Arsha
* Template URL: https://bootstrapmade.com/arsha-free-bootstrap-html-template-corporate/
```

Develop the website using HTML,CSS and JavaScript and python then we use a text editor or web development framework like bootstrap paste the embed code copied from tableau into HTML code of website at the desired location

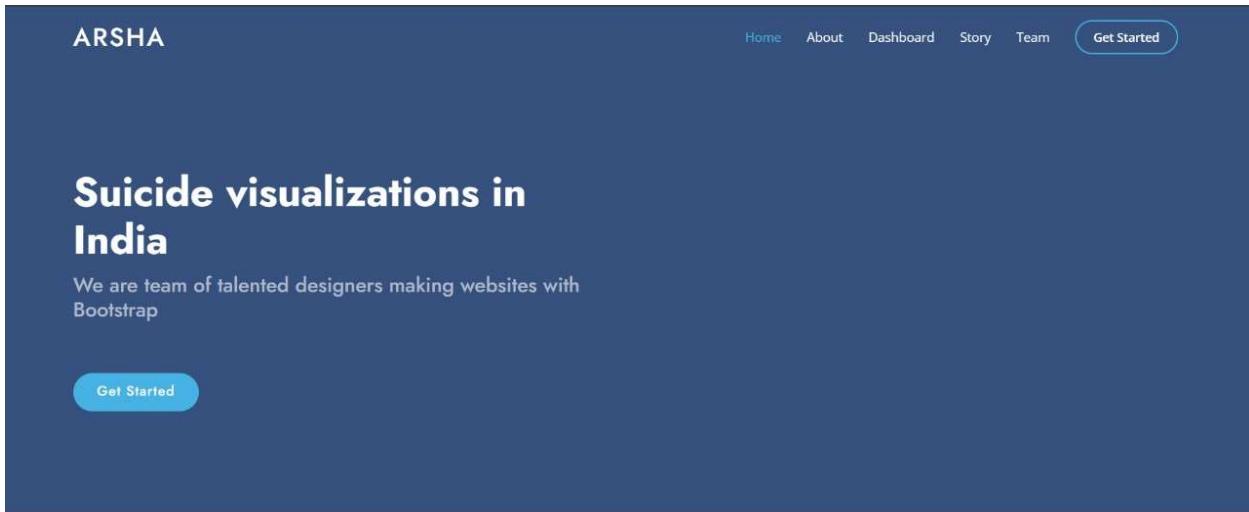


The screenshot shows a code editor interface with two tabs open: 'index.html' and 'app.py'. The 'app.py' tab contains the following Python code:

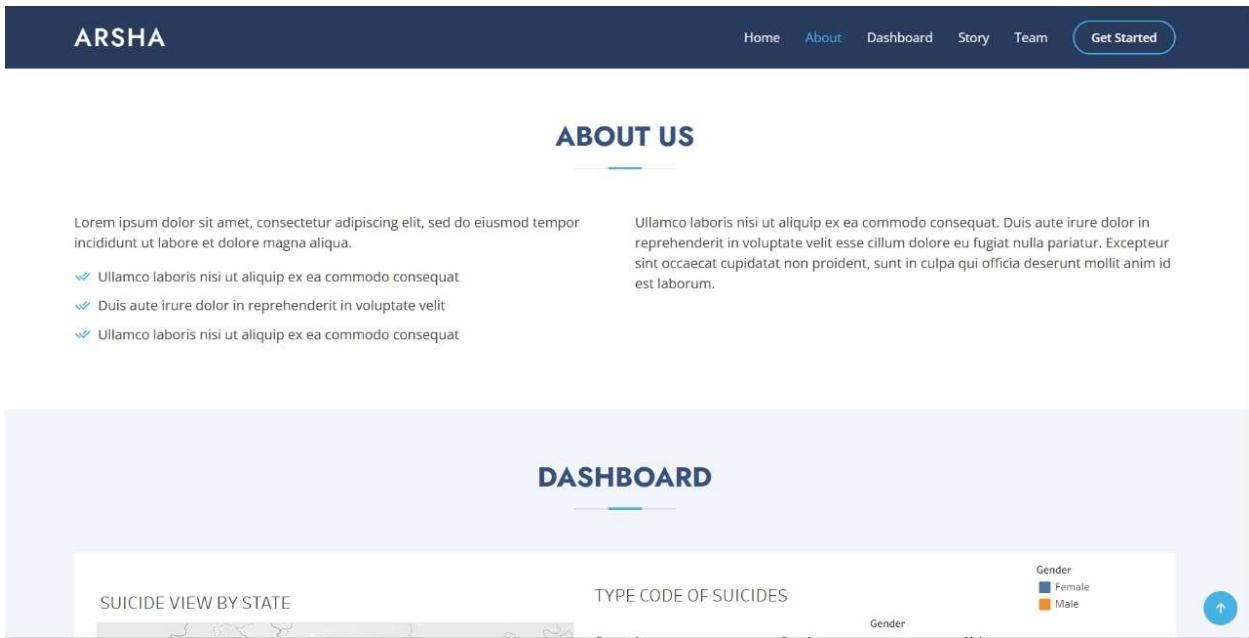
```
C:\> Users > NAGENDRA\OKESH > Desktop > PROJECT > Arsha > app.py
1 from flask import Flask, render_template
2
3 app = Flask(__name__, static_url_path='/static')
4
5 @app.route('/')
6 def index():
7     return render_template('index.html')
8
9 if __name__ == '__main__':
10     app.run(debug=False, host='0.0.0.0', port=8000)
11
```

By using above steps we run the flask code we get the website

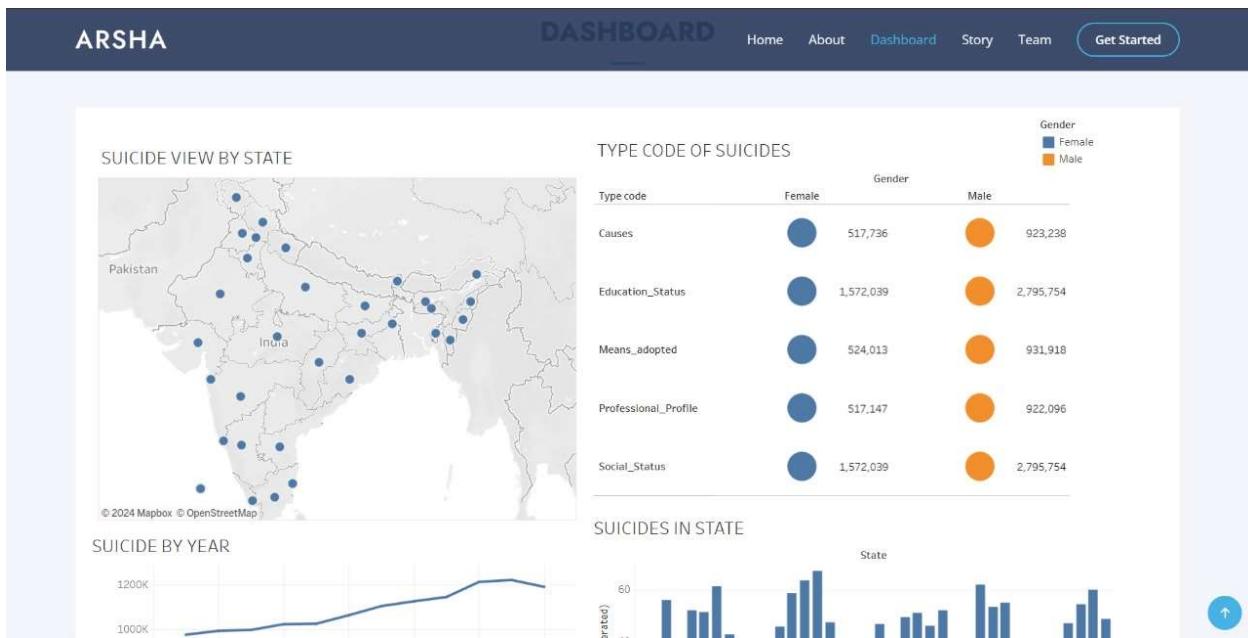
# SUICIDE VISUALIZATIONS IN INDIA



The screenshot shows the homepage of a website named ARSHA. The header features the word "ARSHA" in white. A navigation bar with links to Home, About, Dashboard, Story, Team, and a prominent "Get Started" button is visible. The main content area has a dark blue background with white text. It displays the title "Suicide visualizations in India" and a subtitle "We are team of talented designers making websites with Bootstrap". A "Get Started" button is located at the bottom left of this section.



The screenshot shows two pages of the ARSHA website: "ABOUT US" and "DASHBOARD".  
**ABOUT US:** This page has a dark blue header with "ARSHA" and a navigation bar. The main content area has a light gray background. It contains a section of placeholder text (Lorem ipsum) and a list of three items, each preceded by a green downward arrow icon.  
**DASHBOARD:** This page has a light gray header with "ARSHA" and a navigation bar. The main content area features two charts: "SUICIDE VIEW BY STATE" and "TYPE CODE OF SUICIDES". The "SUICIDE VIEW BY STATE" chart is a horizontal bar chart showing various Indian states. The "TYPE CODE OF SUICIDES" chart is a pie chart divided into four segments. A legend titled "Gender" indicates that blue represents "Female" and orange represents "Male". A small circular button with an upward arrow is located in the bottom right corner of the dashboard area.



The screenshot shows the 'TEAM' section of the ARSHA project website. At the top, there's a dark header bar with the project name 'ARSHA' on the left and a navigation menu with links for Home, About, Dashboard, Story, Team (which is highlighted in blue), and Get Started. Below the header, a quote "Building dreams one project at a time 🌟 #TeamGoals" is displayed. The main content area contains five team member profiles arranged in two rows. The first row features Pasupureddy Varalakshmi (Team Leader) and Pedireddla Kamal (Team Member). The second row features Potnuru Nagendra Lokesh (Team Member) and Regani Roshan Sri (Team Member). The third row features Sabbavarapu Ravi Shankar (Team Member). Each profile includes a small bio, a 'Team Member' status indicator, and social media links for Twitter, Facebook, Instagram, and LinkedIn.

"Building dreams one project at a time 🌟 #TeamGoals"

**Pasupureddy Varalakshmi**  
Team Leader

**Pedireddla Kamal**  
Team Member

**Potnuru Nagendra Lokesh**  
Team Member

**Regani Roshan Sri**  
Team Member

**Sabbavarapu Ravi Shankar**  
Team Member

## CONCLUSION:

*THE ISSUE OF SUICIDES IN INDIA FROM 2001-2012 IS COMPLEX AND MULTIFACETED. WHILE THE PERIOD SAW BOTH ADVANTAGES SUCH AS INCREASED AWARENESS AND RESEARCH ATTENTION AND DISADVANTAGES SUCH AS PROFOUND HUMAN TRADEGY AND ECONOMIC IMPACT ITS CLEAR THAT ADDRESSING THIS ISSUE REQUIRES A HOSTILIC APPROACH .*

## ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Introduction to Business Intelligence → Business Intelligence • Data Integration	understand the fundamentals and significance of Business Intelligence	
Day - 2	• Data processing • Data presentation • ETL Architecture	Gain knowledge of data integration, processing and ETL	
Day - 3	• Introduction to Data Analytics.	Difference between descriptive, diagnostic, predictive and prospective analysis	
Day - 4	• Types of Data Analytics • Descriptive Analytics • Diagnostic Analytics	Develop skills in utilizing various data analytics	
Day - 5	• predictive analytics • prescriptive Analytics	techniques and tools for effective decision making in business	
Day - 6			

## WEEKLY REPORT

WEEK - 1 (From Dt..... to Dt.....)

Objective of the Activity Done:	The objective of week 1 was to
Detailed Report:	provide an intensive introduction to Business Intelligence (BI)
	Introduction to Business Intelligence :-
→	covered various aspects of BI including data integration, processing, presentation, and ETL architecture.
→	explored different types of data analytics:
<u>Descriptive</u> :-	This type focuses on summarizing historical data to understand what happened in the past. It answers questions like "what happened?"
<u>Predictive</u> :-	This type involves forecasting future trends and outcomes based on historical data. It uses statistical models and machine learning algorithms to make predictions.
<u>Prescriptive</u> :-	This type goes beyond predicting future outcomes and recommends actions to achieve desired outcomes. It provides insights into what actions should be taken to optimize results.
→	participants gained insights into the significance of BI and data analytics in the decision making processes.

## ACTIVITY LOG FOR THE SECOND WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<u>Introduction to Tableau:-</u> <ul style="list-style-type: none"> <li>• Introduction to Tableau</li> <li>• Overview and Features</li> </ul>	<ul style="list-style-type: none"> <li>• Gain an overview of Tableau &amp; its features.</li> <li>• Learn to connect</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>• Connecting Tableau to Data Sources</li> <li>• Working with flat files</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire skills in working with flat files.</li> </ul>	
Day - 3	<u>Data Extraction:-</u> <ul style="list-style-type: none"> <li>• Introduction to Database</li> <li>• CRUD operation on tables</li> </ul>	<ul style="list-style-type: none"> <li>• Gain an introduction to databases and their importance</li> </ul>	
Day - 4	Basic SQL operations	<ul style="list-style-type: none"> <li>• Understand the fundamentals of SQL</li> <li>• Learn basic SQL operations</li> </ul>	
Day - 5	Basic SQL operations	<ul style="list-style-type: none"> <li>• Acquire skills in filtering, sorting &amp; aggregating data</li> </ul>	
Day - 6			

## WEEKLY REPORT

WEEK - 2 (From Dt..... to Dt.....)

Objective of the Activity Done: The objective of week 2 was to

Detailed Report: provide an intensive introduction to

Tableau, Data Extraction and Basic SQL operations.

participants were expected to gain foundational knowledge and skills in these areas to prepare them for more advanced concepts.

Introduction to Tableau :-

- Introduced participants to Tableau's features
- Demonstrated how to connect Tableau to different data sources.
- Participants practiced data visualization and analysis.

Data Extraction:-

- provided an overview of databases and their role in data management.
- conducted sessions on creating databases and performing CRUD operations.

Basic SQL operations:-

- covered fundamental concepts of SQL and its importance in database management.
- Taught basic SQL operations including querying, filtering, sorting and aggregating data.

### ACTIVITY LOG FOR THE THIRD WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<u>Architecture of Tableau</u> <ul style="list-style-type: none"> <li>• Interface of Tableau</li> <li>• Tableau field types</li> </ul>	<ul style="list-style-type: none"> <li>• understand Tableau's architecture and components</li> <li>• Familiarize with</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>• Savings and publishing a data source</li> <li>• Live vs extract connection</li> </ul>	<ul style="list-style-type: none"> <li>Tableau's interface elements.</li> <li>• Acquire knowledge of Tableau .</li> </ul>	
Day - 3	<u>charts:-</u> <ul style="list-style-type: none"> <li>• Histograms</li> <li>• Box plot</li> </ul>	<ul style="list-style-type: none"> <li>• Gain an understanding of Histograms, Box plots, Motion</li> </ul>	
Day - 4	<ul style="list-style-type: none"> <li>• Motion</li> <li>• pie</li> <li>• Bar</li> <li>• Line</li> </ul>	<ul style="list-style-type: none"> <li>• Learn the principles and applications of each chart type</li> </ul>	
Day - 5	<ul style="list-style-type: none"> <li>• Bullet</li> <li>• Scatter</li> <li>• Tree</li> <li>• Heat maps</li> </ul>	<ul style="list-style-type: none"> <li>• Text table</li> </ul> <p>Learn how to effectively use each chart type for visualizing</p>	
Day - 6			

## WEEKLY REPORT

WEEK - 3 (From Dt..... to Dt.....)

Objective of the Activity Done: The objective of week 3 was to

Detailed Report: delve deeper into advanced data visualization techniques and data manipulation functionalities in Tableau.

Architecture of Tableau :-

Explored the architecture of Tableau, including its components and interface elements.

Discussed Tableau field types, saving and publishing data charts :-

→ Explored various chart types including Histograms, Box plots, Motion charts, pie charts, Bar charts, Line charts and Bubble charts.

→ participants gained an understanding the principles and applications of each chart type.

Advanced chart Types :-

→ Delved into advanced chart types such as Bullet charts, scatter plots, Tree maps, Heat maps, maps.

→ participants learned how to effectively use each chart type for visualizing different types of data and patterns.

### ACTIVITY LOG FOR THE FORTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<u>Working with meta data and Data Blending :-</u> <ul style="list-style-type: none"> <li>• connecting to data source</li> <li>• Tableau data types</li> </ul>	<ul style="list-style-type: none"> <li>• Develop expertise in connecting Tableau to diverse data sources such as Excel, Cues</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>• connection to Excel</li> <li>• cues and PDFs</li> <li>• data preparation</li> </ul>	<ul style="list-style-type: none"> <li>• Understand Tableau data types and their implication in data visualization</li> </ul>	
Day - 3	<ul style="list-style-type: none"> <li>• Joins and Union</li> <li>• Dealing with NULL values, cross-database joining</li> </ul>	<ul style="list-style-type: none"> <li>• Gain comprehensive understanding and practical skills in various types</li> </ul>	
Day - 4	<ul style="list-style-type: none"> <li>• cross-database joining</li> <li>• Data blending</li> </ul>	<ul style="list-style-type: none"> <li>• Learn advanced techniques such as NULL values</li> </ul>	
Day - 5	<u>Advanced data Manipulation</u> <ul style="list-style-type: none"> <li>• preview</li> <li>• Mask and highlight</li> <li>• Groups</li> </ul>	<ul style="list-style-type: none"> <li>• Master advanced data manipulation techniques</li> </ul>	
Day - 6			

## WEEKLY REPORT

WEEK - 4 (From Dt..... to Dt.....)

Objective of the Activity Done: The objective of week 4 was

Detailed Report: to delve deeper into advanced data visualization, including data organization, filtering, calculations and expressions.

Working With Metadata and Data Blending :-

- Developed expertise in connecting Tableau to diverse data sources including Excel, cubes and PDFs for analysis.
- Understood Tableau data types and their implications.

Joins, Union, and Data Blending :-

- Gained comprehensive understanding and practical skills in various types of joins including Left, Right, Inner, and outer joins.
- Learned advanced techniques such as dealing with NULL values, cross-database joining, and data blending to handle complex data scenarios effectively.
- Acquired proficiency in data extraction processes including refresh extraction, increment extraction, and building extracts.
- Developed expertise in cross-database joining and data blending to integrate and analyze data from multiple sources.

## ACTIVITY LOG FOR THE FIFTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<u>Advanced Data Manipulations</u> <ul style="list-style-type: none"> <li>• Groups</li> <li>• sets</li> <li>• constant sets</li> </ul>	<ul style="list-style-type: none"> <li>→ Gain proficiency in creating and editing groups and sets</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>• computed sets</li> <li>• Bins</li> <li>• Hierarchies</li> </ul>	<ul style="list-style-type: none"> <li>• Learn how to utilize bins for grouping continuous data</li> </ul>	
Day - 3	<ul style="list-style-type: none"> <li>• sorting and Types</li> <li>• Using the formatting pane to work</li> </ul>	<ul style="list-style-type: none"> <li>• Master Explore sorting options &amp; techniques</li> </ul>	
Day - 4	<u>Working with filters, organizing data:-</u> <ul style="list-style-type: none"> <li>• Working with filters</li> <li>• Filtering continuous</li> </ul>	<ul style="list-style-type: none"> <li>• Master edition &amp; removal of filters to refine &amp; focus datasets</li> </ul>	
Day - 5	<ul style="list-style-type: none"> <li>• filtering in Tableau</li> <li>• Types of filters</li> <li>• filtering the order</li> </ul>	<ul style="list-style-type: none"> <li>• Gain proficiency in working with filters to manipulate</li> </ul>	
Day - 6			

## WEEKLY REPORT

WEEK - 5 (From Dt..... to Dt.....)

Objective of the Activity Done: The objective of week 5 was
Detailed Report: to deepen participants understanding and proficiency in advanced Tableau functionalities, including data organization.
<u>Advanced Data Manipulations:-</u>
Mastered advanced data manipulation techniques including previewing, marking and highlighting to enhance data exploration and analysis.
<u>Bins, Hierarchies, Sorting and Formatting:-</u> participants learned to use bins for grouping continuous data into discrete intervals and creating hierarchies for data organization.
<u>Working with Filters and Data Organization:-</u>
Mastered the addition and removal of filters to refine and focus datasets based on specific criteria.
<u>Advanced Filtering in Tableau:-</u>
<ul style="list-style-type: none"><li>Explored advanced filtering tools in Tableau for precise data manipulation and analysis.</li><li>participants learned about different types of filters and their applications, including Categorical, range and top N filters.</li></ul>

## ACTIVITY LOG FOR THE SIXTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<ul style="list-style-type: none"> <li>calculated fields, Quick Table calculations and LOD Expressions :-</li> <li>calculated fields in Tableau</li> </ul>	<ul style="list-style-type: none"> <li>Learn how to create calculated fields in Tableau for custom data</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>Quick Table calculations</li> </ul>	<ul style="list-style-type: none"> <li>Utilize Tableau's quick table calculations for instant data analysis</li> </ul>	
Day - 3	<ul style="list-style-type: none"> <li>LOD Expressions in Tableau</li> </ul>	<ul style="list-style-type: none"> <li>Utilize Tableau's quick table calculations for compute values.</li> </ul>	
Day - 4	<ul style="list-style-type: none"> <li>Working with Mapping, Calculations and Expressions</li> <li>Working on coordinate points</li> </ul>	<ul style="list-style-type: none"> <li>Master mapping skills including coordinate point</li> </ul>	
Day - 5	<ul style="list-style-type: none"> <li>plotting longitude &amp; latitude</li> <li>Editing unrecognized locations .</li> </ul>	<ul style="list-style-type: none"> <li>Explore advanced map customization techniques</li> </ul>	
Day -6			

## WEEKLY REPORT

WEEK - 6 (From Dt..... to Dt.....)

Objective of the Activity Done: The objective of week 6 was to

Detailed Report: delve into advanced Tableau functionalities

focusing on mapping, calculations, expressions, parameters, calculated fields, quick Table calculations & LOD Expressions:-  
→ participants learned how to create calculated fields in Tableau for custom data analysis and visualization.

Quick Table Calculations:-

- utilized Tableau's quick table calculations for instant data analysis and visualization enhancements.

LOD Expressions in Tableau:-

- participants delved deeper into the use of LOD expressions for advanced analytics.

Mapping, calculations, and Expressions:-

- participants mastered mapping skills including coordinate point manipulation and longitudinal / latitude plotting for spatial data analysis.

- Explored advanced map customization techniques such as editing unrecognized locations and utilizing geocoding options.

- Developed proficiency in advanced calculations and expressions in Tableau.

## ACTIVITY LOG FOR THE SEVEN WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<u>Advanced mapping techniques:-</u> <ul style="list-style-type: none"> <li>Working on background image</li> </ul>	<ul style="list-style-type: none"> <li>Learn how to incorporate background images and add images in Tableau</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>plotting points on images and generating coordinates</li> <li>Map visualization</li> </ul>	<ul style="list-style-type: none"> <li>Explore techniques for plotting points on images.</li> </ul>	
Day - 3	<u>Working with parameters</u> <ul style="list-style-type: none"> <li>creating parameters</li> <li>parameters in calculations</li> </ul>	<ul style="list-style-type: none"> <li>Master the creation of parameters in Tableau to enhance dynamic analysis</li> </ul>	
Day - 4	<ul style="list-style-type: none"> <li>Using parameters with filters</li> <li>column selection parameters</li> <li>chart selection parameters</li> </ul>	<ul style="list-style-type: none"> <li>Gain proficiency in integrating parameters into calculations.</li> </ul>	
Day - 5	<u>Visual Analytics pane :-</u> <ul style="list-style-type: none"> <li>K-means cluster analysis</li> <li>Trend and reference lines</li> </ul>	<ul style="list-style-type: none"> <li>Explore the visual analytics pane in Tableau.</li> </ul>	
Day - 6			

## WEEKLY REPORT

WEEK - 7 (From Dt..... to Dt.....)

Objective of the Activity Done:
The objective of week 7 was
Detailed Report: to focus on advanced Tableau function
- alities including parameters, visual analytics.
<u>Advanced Mapping Techniques:-</u>
<ul style="list-style-type: none"><li>participants learned to incorporate background images and add images in Tableau for enhanced visualizations.</li><li>Explored techniques for plotting points on images and generating coordinates for customized map visualizations.</li><li>Gained proficiency in map visualization and creating custom territories for effective spatial data analysis.</li></ul>
<u>Working with parameters:-</u>
<ul style="list-style-type: none"><li>participants mastered the creation of parameters in Tableau to enhance dynamic analysis and visualization capabilities.</li><li>Gained proficiency in integrating parameters into calculations for flexible and customizable data analysis.</li><li><u>Visual Analytics pane:-</u></li><li>Explored the Visual Analytics pane in Tableau for advanced data exploration and visualization techniques.</li></ul>

## ACTIVITY LOG FOR THE EIGHT WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	<p><u>Visual Analytics pane</u> :-</p> <ul style="list-style-type: none"> <li>• visual analytics in Tableau</li> <li>• Forecasting, confidence and bands</li> </ul>	<ul style="list-style-type: none"> <li>• Learn K-means cluster analysis to identify patterns and groupings</li> </ul>	
Day - 2	<p><u>Dashboards and stories</u> :-</p> <ul style="list-style-type: none"> <li>• Building and formatting a dashboard using size,</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire skills in building and formatting dashboards</li> </ul>	
Day - 3	<ul style="list-style-type: none"> <li>• objects, views, filters</li> <li>• Best practices for making creative dashboards</li> </ul>	<ul style="list-style-type: none"> <li>• in Tableau using various elements such as size, objects, views, filters</li> </ul>	
Day - 4	<ul style="list-style-type: none"> <li>• creating multiple dashboards</li> </ul>	<ul style="list-style-type: none"> <li>• Learn to effectively organize and manage multiple dashboards</li> </ul>	
Day - 5	<ul style="list-style-type: none"> <li>• creating stories</li> <li>• Including the intro of story points.</li> </ul>	<ul style="list-style-type: none"> <li>• Master the creation of stories in Tableau, incorporating engaging story</li> </ul>	
Day - 6			

## WEEKLY REPORT

WEEK - 8 (From Dt..... to Dt: Dt.....)

Objective of the Activity Done: The objective of week 8 was to
Detailed Report: focus on advanced Tableau functionalities including parameters, visual analytics, dashboards and story telling .
<u>Visual Analytics pane:-</u>
<ul style="list-style-type: none"><li>Learned K-means cluster analysis to identify patterns and grouping within datasets .</li></ul>
<u>Dashboards and stories:-</u>
<ul style="list-style-type: none"><li>Acquired skills in building and formatting dashboards in Tableau using various elements such as size, objects, views, filters .</li><li>Learned best practices for designing creative and impactful dashboards that effectively communicate insights to stakeholders.</li></ul>
<u>Creating Multiple Dashboards:-</u>
<ul style="list-style-type: none"><li>Gained proficiency in creating multiple dashboards within Tableau for comprehensive data presentation and analysis.</li><li>Learned to effectively organize and manage multiple dashboards to provide different perspectives and insights on the same dataset.</li></ul>

**ACTIVITY LOG FOR THE NINETH WEEK**

<b>Day &amp; Date</b>	<b>Brief description of the daily activity</b>	<b>Learning Outcome</b>	<b>Person In-Charge Signature</b>
Day - 1	<ul style="list-style-type: none"> <li>• creating as well as updating the story points</li> </ul>	<ul style="list-style-type: none"> <li>• Learn to create and update story points .</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>• Adding catchy visuals in story</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance storytelling effectiveness by incorporating catchy visuals .</li> </ul>	
Day - 3	<ul style="list-style-type: none"> <li>• Adding annotations with descriptions, dashboards and stories</li> </ul>	<ul style="list-style-type: none"> <li>• Master the skill of adding annotations with descriptions</li> </ul>	
Day - 4	<ul style="list-style-type: none"> <li>• highlight actions, URL actions and filter actions</li> <li>• selecting &amp; clearing values</li> </ul>	<ul style="list-style-type: none"> <li>• Gain proficiency in implementing highlight actions, URL actions .</li> </ul>	
Day - 5	<p><u>Build Tableau Web Application :-</u></p> <ul style="list-style-type: none"> <li>• Introduction to flask</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire an introduction to flask,a python web framework</li> </ul>	
Day -6			

## WEEKLY REPORT

WEEK - 9 (From Dt..... to Dt.....)

Objective of the Activity Done: The objective of week 9 was
Detailed Report: do focus on advanced Tableau functions - stories including story telling, annotation, web application development with flask. <u>creating stories:-</u> <ul style="list-style-type: none"><li>Mastered the creation and updating of stories in Tableau, including the introduction of story points and adding catchy visuals to enhance storytelling effectiveness.</li></ul>
<u>Adding Annotations and Dashboard interactions:-</u> <ul style="list-style-type: none"><li>Participants mastered the skill of adding annotations with descriptions to provide contextual information within Tableau dashboards and stories.</li><li>Gained proficiency in implementing highlight actions, URL actions, and filter actions to enable interactive exploration and navigation within Tableau dashboards.</li></ul>
<u>Building Tableau web application with Flask and Bootstrap:-</u> <ul style="list-style-type: none"><li>Acquired an introduction to Flask, a Python web framework, for building web applications, including its core concepts and functionalities.</li><li>Learned to work with the Flask framework to develop dynamic and interactive web application.</li></ul>

**ACTIVITY LOG FOR THE TENTH WEEK**

<b>Day &amp; Date</b>	<b>Brief description of the daily activity</b>	<b>Learning Outcome</b>	<b>Person In-Charge Signature</b>
Day - 1	<ul style="list-style-type: none"> <li>• Working with flask framework</li> </ul>	<ul style="list-style-type: none"> <li>• Master the skill of adding an API to flask framework</li> </ul>	
Day - 2	<ul style="list-style-type: none"> <li>• Introduction to Bootstrap</li> </ul>	<ul style="list-style-type: none"> <li>• Learn to Gain an understanding of Bootstrap</li> </ul>	
Day - 3	<ul style="list-style-type: none"> <li>• Working with Bootstrap</li> </ul>	<ul style="list-style-type: none"> <li>• Learn to utilize Bootstrap components such as grids, bars</li> </ul>	
Day - 4	<ul style="list-style-type: none"> <li>• Building application with flask framework</li> </ul>	<ul style="list-style-type: none"> <li>• Learn fundamentals of flask, including routing, request handling.</li> </ul>	
Day - 5	<ul style="list-style-type: none"> <li>• Embedding Dashboard and story with web application.</li> </ul>	<ul style="list-style-type: none"> <li>• Learn how to embed Tableau dashboards and stories into web</li> </ul>	
Day - 6			

## WEEKLY REPORT

WEEK - 10 (From Dt..... to Dt.....)

Objective of the Activity Done: The objective of week 10 was to

Detailed Report: focus on advanced Tableau functionalities including Bootstrap integration and embedding Tableau visualizations with web applications.

Working with Bootstrap :-

- participants mastered the use of Bootstrap, a front-end framework, for creating responsive and visually appealing web interfaces.

Building Applications with Flask framework :-

- Acquired the skills necessary to build web applications using the Flask framework, a light-weight and flexible Python web framework.
- Learned the fundamentals of Flask, including routing, request handling, templates.

Embedding dashboards and stories into web application

- participants learned how to embed Tableau dashboards and stories into web applications using Tableau's embedding functionalities.
- explored methods for integrating Tableau visualization seamlessly into web pages, enhancing user experience and interactivity.