```
========== Data Analysis & Visualization Program ==========
1. Load Dataset
2. Explore Data
3. Perform DataFrame Operations
4. Handle Missing Data
5. Generate Descriptive Statistics
6. Data Visualization
7. Save Visualization
8. Exit
============================================================
Enter your choice:  1

== Load Dataset ==
Enter the path of the dataset (CSV file):  C:\Users\kajal\Downloads\covid19_full_dataset_2020.csv
Dataset loaded successfully!

========== Data Analysis & Visualization Program ==========
1. Load Dataset
2. Explore Data
3. Perform DataFrame Operations
4. Handle Missing Data
5. Generate Descriptive Statistics
6. Data Visualization
7. Save Visualization
8. Exit
============================================================
Enter your choice:  2

== Explore Data ==
1. Display the first 5 rows
2. Display the last 5 rows
3. Display column names
4. Display data types
5. Display basic info
Enter your choice:  1
         Date Country  Confirmed  Recovered  Deaths
0  2020-01-01   India        152        190      11
1  2020-01-02   India        637        287      23
2  2020-01-03   India       1035        605      35
3  2020-01-04   India       1355        911      49
4  2020-01-05   India       1511       1244      64
```

```
========== Data Analysis & Visualization Program ==========
1. Load Dataset
2. Explore Data
3. Perform DataFrame Operations
4. Handle Missing Data
5. Generate Descriptive Statistics
6. Data Visualization
7. Save Visualization
8. Exit
============================================================
Enter your choice:  3

== DataFrame Operations ==
1. Sort values
2. Group by column and sum
3. Filter rows
Enter your choice:  1
Enter column name to sort:  date
Invalid column name!

========== Data Analysis & Visualization Program ==========
1. Load Dataset
2. Explore Data
3. Perform DataFrame Operations
4. Handle Missing Data
5. Generate Descriptive Statistics
6. Data Visualization
7. Save Visualization
8. Exit
============================================================
Enter your choice:  5

== Descriptive Statistics ==
           Confirmed     Recovered       Deaths
count     366.000000    366.000000   366.000000
mean    50804.046448  39319.510929  1722.811475
std     29322.216301  22720.073665   978.010009
min       152.000000    190.000000    11.000000
25%     25984.000000  19565.250000   852.500000
50%     50590.500000  39164.000000  1738.500000
75%     75523.000000  59522.000000  2609.000000
max    102074.000000  78478.000000  3365.000000
```

```
========== Data Analysis & Visualization Program ==========
1. Load Dataset
2. Explore Data
3. Perform DataFrame Operations
4. Handle Missing Data
5. Generate Descriptive Statistics
6. Data Visualization
7. Save Visualization
8. Exit
============================================================
Enter your choice:  6

== Data Visualization ==
1. Line Plot (new cases over time)
2. Bar Chart (Top 10 countries total cases)
3. Histogram (Distribution of new cases)
4. Scatter Plot (New cases vs New deaths)
5. Heatmap (Correlation matrix)
6. Bar Plot (Any custom x,y columns)
Enter your choice:  3
Column 'new_cases' not found!

========== Data Analysis & Visualization Program ==========
1. Load Dataset
2. Explore Data
3. Perform DataFrame Operations
4. Handle Missing Data
5. Generate Descriptive Statistics
6. Data Visualization
7. Save Visualization
8. Exit
============================================================
Enter your choice:  7
Enter file name to save the plot (e.g., plot.png):  covid 19
Visualization saved as covid 19 successfully!

========== Data Analysis & Visualization Program ==========
1. Load Dataset
2. Explore Data
3. Perform DataFrame Operations
4. Handle Missing Data
5. Generate Descriptive Statistics
6. Data Visualization
7. Save Visualization
```