Steps for each task in Power BI

---

i) Create a choropleth map to highlight the state with the highest revenue

1. Open Power BI Desktop.

2. Load the dataset by selecting Get Data > Excel Workbook > Select your file.

3. Choose the Map visual.

4. Drag the State column to the Location field.

5. Drag the Revenue column to the Size or Color saturation field.

6. Use the color gradient to highlight states with higher revenue distinctly.

---

ii) Create a line chart to show revenue by month

1. Select the Line Chart visual.

2. Drag the Month column to the Axis field.

Make sure the month values are sorted chronologically, not alphabetically.

3. Drag the Revenue column to the Values field.

4. Apply formatting to display trends clearly.

---

iii) Create a bin for the age measure (size 10)

1. In the Fields pane, right-click on the Customer Age column and select New Group.

2. In the Grouping window:

Set the Bin size to 10.

Name this new grouping field as Age Bins.

3. Use this new field to analyze Revenue by age bins in visuals like bar or column charts.

---

iv) Create a donut chart for percentage of revenue per region

1. Select the Donut Chart visual.

2. Drag the Country or Region column to the Legend field.

3. Drag the Revenue column to the Values field.

4. To calculate the percentage:

Create a new measure:

Revenue percentage = SUM(SalesTable[Revenue])/ (CALCULATE(SUM(SalesTable[Revenue]),ALL(SalesTable[Country]))*100)

Use this measure for the chart values.

---

v) Create a butterfly chart for male vs. female revenue by product category

1. Create two separate measures:

FEmale Revenue = CALCULATE(SUM(SalesTable[Revenue]),SalesTable[Customer Gender]="F")

Male Revenue = CALCULATE(SUM(SalesTable[Revenue]),SalesTable[Customer Gender]="M")

2. Use a Clustered Bar Chart visual.

3. Drag Product Category to the Axis field.

4. Add Male Revenue and Female Revenue to the Values field.

5. Format the chart to display values side-by-side for comparison.

---

vi) Calculate the average revenue per state and classify profitability

1. Create a calculated field:

Avg Revenue per State = SUM(Revenue) / DISTINCTCOUNT(State)

2. Create another calculated field to classify states:

Profitability = IF(Avg Revenue per State > [Threshold], "Profitable", "Non-Profitable")

3. Use this field to visualize or filter states in other visuals.

---

vii) Build a dashboard

1. Combine all visuals onto a single dashboard.

2. Add slicers for interactivity:

By Month.

By State.

By Gender.

3. Arrange the visuals aesthetically and use titles for clarity.

Program 10

Step-by-Step Procedure to Visualize the Data in Power BI

Step 1: Import the Dataset into Power BI

1. Open Power BI Desktop.

2. Go to the Home tab and click Get Data > Text/CSV.

3. Select the uploaded file (gdp_data_2000_2026.csv) and click Load.

Step 2: Create Visualizations

i) Symbol Map for Countries' Data

1. Add a new page in the report.

2. From the Fields pane, drag the following fields:

   - Country to Location (in the visualizations pane).

   - Latitude and Longitude to the respective fields under Map visualization.

3. In the visualizations pane, select Map (symbol map).

4. Customize:

   - Use GDP (in billions) to size the symbols for each country.

   - Add a title to the map for clarity.

---

ii) Bar Graph for GDP of Belgium (2006–2026)

1. Add a new page.

2. In the Fields pane:

   - Drag Year to the Axis.

   - Drag GDP (in billions) to the Values.

   - Add a filter to the page to only include Belgium in the Country field.

   - Apply another filter to restrict the years from 2006 to 2026.

3. Select the Stacked Column Chart visualization.

4. Customize:

   - Add data labels for clarity.

   - Title the chart as "GDP of Belgium (2006–2026)."

---

iii) Pie Chart for GDP of Selected Countries in 2010

1. Add a new page.

2. Filter the dataset to only show data for 2010.

3. In the Fields pane:

   - Drag Country to the Legend.

   - Drag GDP (in billions) to the Values.

4. Apply a filter to include only the countries: India, Nepal, Romania, South Asia, and Singapore.

5. Select the Pie Chart visualization.

6. Customize:

   - Add a title like "GDP Distribution (2010)."

   - Enable data labels to show percentages or values.

---

iv) Comparing Bhutan and Costa Rica’s GDP

1. Add a new page.

2. Filter the dataset to include only Bhutan and Costa Rica in the Country field.

3. Drag Year to the Axis and GDP (in billions) to Values.

4. Select the Clustered Bar Chart visualization.

5. Customize:

   - Differentiate Bhutan and Costa Rica with contrasting colors.

   - Title the chart "GDP Comparison: Bhutan vs. Costa Rica."

---

v) Scatter Plot for GDP of Mexico, Algeria, Fiji, and Estonia (2004–2006)

1. Add a new page.

2. Filter the dataset to include:

   - Countries: Mexico, Algeria, Fiji, and Estonia.

   - Years: 2004–2006.

3. Drag the following fields:

   - Year to the Details or Legend.

   - GDP (in billions) to the Values.

   - Country to the Axis.

4. Select the Scatter Plot visualization.

5. Customize:

   - Enable data labels for better clarity.

   - Title the chart "GDP of Selected Countries (2004–2006)."

---

vi) Build an Interactive Dashboard

1. Add a new page.

2. Combine all the visualizations on this page:

   - Add the Symbol Map for geographic representation.

   - Include the Bar Graph, Pie Chart, and Scatter Plot.

3. Use slicers for interactivity:

   - Add a slicer for Year to filter across all visuals.

   - Add a slicer for Country to focus on specific regions or countries.

4. Customize:

   - Arrange the visuals for a clean layout.

   - Add a title to the dashboard: "Global GDP Analysis Dashboard (2000–2026)."

Step 3: Save and Share

1. Save the Power BI report as a .pbix file.

2. Publish to Power BI Service if you wish to share it with others.