**Power BI Basic Exercise: Using the nycflights13 Dataset**

**Objective**: Familiarize yourself with the basics of Power BI, including data loading, profiling, simple transformations, and creating a basic report.

**Dataset**: nycflights13 – Contains data about flights departing NYC in 2013. It includes various tables like flights, airlines, airports, weather, and planes.

**Part 1: Load and Profile Data**

1. **Download the Dataset**:
   * Find the nycflights13 dataset, available in various formats suitable for Power BI (such as CSV).
   * Ensure you have the following tables: flights, airlines, airports, weather, and planes.
2. **Load the Data into Power BI**:
   * Open Power BI Desktop.
   * Click on “Get Data” and select “CSV” if you have the dataset in CSV format.
   * Load each table (flights, airlines, airports, weather, planes) into Power BI.
3. **Data Profiling**:
   * Use the “Data” view to explore each table.
   * Check basic statistics and view the data type of each column.
   * Identify any missing values or unusual entries.

**Part 2: Edit Data with Power Query**

1. **Open Power Query Editor**:
   * Select a table (e.g., airlines) and go to “Transform Data” to open Power Query Editor.
2. **Make a Minor Edit**:
   * Example Task: Rename the carrier column to airline\_code.
   * Use the “Rename Columns” option from the Home tab.
3. **Apply Changes**:
   * Once your edits are complete, click “Close & Apply” to return to Power BI Desktop.

**Part 3: Create a Basic Report**

1. **Choose Report Types**:
   * Select at least two types of visualizations. For instance:
     + A bar chart showing the number of flights per airline.
     + A pie chart displaying distribution of flights among different airports.
2. **Add Data to Visuals**:
   * Drag fields to the appropriate values area in each visualization.
   * For the bar chart, use airline\_code for the axis and count of flight for the value.
   * For the pie chart, use dest (destination airport) for the legend and count of flight for the value.
3. **Add Filters**:
   * Add a report-level filter to only include flights from JFK airport.
   * Add a visual-level filter to the pie chart to show only top 5 airports by number of flights.
4. **Finalize Your Report**:
   * Arrange the visuals on the report canvas.
   * Make sure the report is clean and readable.

**Part 4: Save and Share**

* **Save Your Work**:
  + Save the Power BI file (\*.pbix).
* **Prepare to Share**:
  + If necessary, publish the report to Power BI Service for sharing with others or include instructions on how to view the report in Power BI Desktop.

This exercise covers the fundamentals of using Power BI with a practical dataset. It introduces new users to essential features like data importation, profiling, basic transformations in Power Query, and creating simple but effective reports.