**Internship Report on Task 1 Section**

**Introduction**

This task required me to visualize the relationship between app popularity and quality by comparing the **average rating** and **total reviews** of the top 10 app categories.

**Background**

The dataset was the Google Play Store apps dataset. I worked with the columns App, Category, Rating, Reviews, Size, Installs, and Last Updated. The task also required applying multiple filters (rating, size, update month) and enforcing a **time-based visibility rule**.

**Learning Objectives**

* Practice applying multiple row-level filters in Pandas.
* Rank app categories by installs and select the top 10.
* Aggregate metrics (average rating and total reviews).
* Plot a grouped bar chart in Matplotlib.
* Add a **time restriction (3–5 PM IST)** for conditional display.

**Activities and Tasks**

* Cleaned columns: converted Reviews and Installs to numeric, Size into MB, and Last Updated into datetime.
* Applied filters: rating ≥ 4.0, size ≥ 10 MB, and apps updated in January.
* Found the top 10 categories by installs from the playstore.
* Aggregated average rating and total reviews for those categories of apps.
* Plotted a grouped bar chart and visualized it.
* Added logic so the chart is only visible between 3–5 PM IST and it matched the expected outcome.

**Skills and Competencies**

* Data cleaning with Pandas.
* Data aggregation with groupby and pivot tables.
* Data visualization using Matplotlib.
* Handling timezones with Python (pytz).

**Feedback and Evidence**

* Screenshot 1: Table showing aggregated metrics for top 10 categories.
* Screenshot 2: Output message when chart is hidden outside time window.

**Challenges and Solutions**

* Faced errors like AttributeError: 'list' object has no attribute 'groupby' because I accidentally converted a DataFrame to a list. Solved this by carefully checking type() of variables and only grouping DataFrames.
* Mis-typed timezone "Asia/Kolkalta" instead of "Asia/Kolkata", which raised UnknownTimeZoneError. Corrected the spelling.

**Outcomes and Impact**

* Learned how to filter data efficiently.
* Understood how to combine different metrics in one chart.
* Gained confidence in handling time restrictions for dashboards.

**Conclusion**

Task 1 improved my skills in cleaning, filtering, and visualizing the data. It also showed me how to implement real business requirements like time-gated charts.