



## LEVEL 1 – BASIC REPORTING (6)

*(SELECT, WHERE, GROUP BY)*

1. Count the total number of libraries **per district**.
2. List libraries established **before 2000** with `total_books > 5000`.
3. Find total employees **per library**.
4. Count readers registered **per library**.
5. Show total books **per genre**.
6. Find the top 3 libraries with the **highest number of books**.



## LEVEL 2 – OPERATIONAL INSIGHTS (6)

*(JOINS, filters, real usage data)*

1. Count books by status: **Issued, Returned, Overdue**.
2. List all **currently overdue books** with reader name and library name.
3. Identify readers who currently have **more than 2 issued books**.
4. Find books that were **never issued**.
5. Monthly count of book issues for the year 2024.
6. Find libraries with the **highest number of book issues**.



## LEVEL 3 – FINANCIAL ANALYSIS (6)

*(Aggregations, calculations, ratios)*

1. Total funds allocated **year-wise**.
2. Find libraries where **spent > 75% of total\_funds**.
3. Calculate fund utilization percentage **per library**.
4. Rank libraries based on **remaining funds**.
5. Identify libraries with **zero or negative remaining funds**.
6. Average annual funding **per library**.



## LEVEL 4 – CROSS-TABLE ANALYTICS (6)

*(Complex joins, business insights)*

1. For each library, show:
  - total books
  - total readers
  - total employees
1. Calculate **reader-to-book ratio** per library.
2. Identify the **most issued genre** per library.
3. Find the **most frequently issued book** overall.
4. Find libraries that have **high book issues but low staff count**.
5. Total fine amount collected **per library**.



## LEVEL 5 – ADVANCED SQL (6)

*(Window functions, ranking, trends)*

1. Rank books by issue count **within each library**.
2. Top 3 most active readers **per library**.
3. Running total of fines collected **month-wise**.
4. Compare average issue duration **by genre**.
5. Identify libraries with an **increasing overdue trend**.
6. Rank libraries based on **overall performance score** (books + readers + issues + funds).