

This document outlines a series of SQL tasks designed to analyse data from the world database. Each task focuses on specific scenarios, such as demographic analysis, global health initiatives, travel promotions, and urban planning. Below is a concise summary of the tasks, their objectives, and the SQL queries used.

Key Topics Covered:

1. Understanding Business Requirements

- Data to store
- User needs

2. Designing the Database Schema

- Table structure
- Relationships between tables

3. Implementing the Database

- SQL commands for table creation
- Defining relationships

4. Populating the Database

- Inserting initial data

5. Maintaining the Database

- Ensuring accuracy and security

6. SQL Practical

- Demographic analysis queries

These SQL tasks demonstrate practical applications of database querying in real-world scenarios. By leveraging SQL's powerful features, we can efficiently extract meaningful insights from large datasets, supporting decision-making across various domains like healthcare, urban planning, and education.

1. **Aggregation Functions:** Used extensively (`COUNT` , `MAX` , `MIN`) to summarize data.
2. **Filtering Data:** `WHERE` clauses were applied to refine results based on specific conditions.
3. **Sorting:** `ORDER BY` was used to organize data alphabetically or numerically.
4. **Pattern Matching:** `LIKE` operator helped identify cities based on name patterns.
5. **Subqueries:** Nested queries enabled comparisons and derived results dynamically.

1. **Data Joining:** Most queries involve joining tables (`city` and `country`) to extract meaningful insights.
2. **Aggregation Functions:** Queries frequently use functions like `MAX` , `AVG` , and `SUM` for calculations.
3. **Filtering and Sorting:** `WHERE` , `ORDER BY` , and `LIMIT` clauses are used to refine results and present data in a structured format.
4. **Real-World Applications:** These queries address practical needs in fields such as demographics, healthcare, travel, and economics.

This workbook demonstrates how SQL can be leveraged to extract valuable insights from databases for diverse analytical purposes. Each query is tailored to meet specific business requirements, showcasing the versatility and power of SQL in data-driven decision-making.