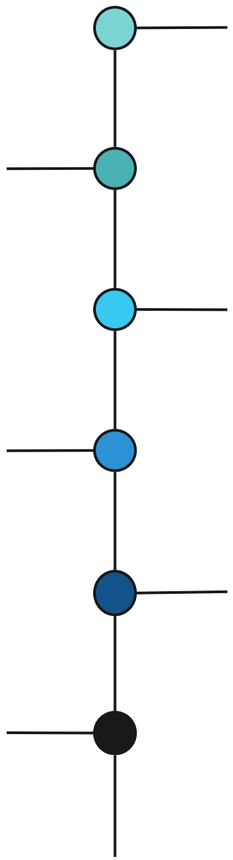
TOPIC: EXPORT GOODS DATABASE

Tools: PostgreSQL, SQL, pgAdmin 4

Purpose:

Design and implement a relational database for storing and analyzing export statistics by regions.



Stage 1

Project Goal

Stage 2

Data Source and Structure

Stage 3

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Stage 4

Data Processing Logic

Stage 5

ER Diagram and Visualization

Stage 6

Advantages of the Project

Project Goal

Main goal of the project:

- Store export data for different regions
- Analyze historical values from 2011 to 2024
- Calculate regional indicators
- Generate a statistical summary of best results

Why it is needed:

- To organize large statistical data
- To simplify analysis and comparison between regions
- To demonstrate relational database design with constraints and relations

Data Source and Structure

Input data:

- Export values for 7 regions
- Period: 2011–2024

Output data:

- Regional indicators
- Aggregated statistical results

The database is structured to separate:

- raw data
- calculated indicators
- final statistics

Central Table — export_goods

Role:

Main data source of the database

Contains:

- Region identifier
- Region name
- Export values by year (2011–2024)

Key properties:

- region_id — Primary Key
- region_name — Unique value

Connection

This table is referenced by all other tables.

Tables

Table Relationships (Foreign Keys)

Relationship type:

- One-to-one relationship

Implementation:

- Each regional table contains region_id
- region_id is both:
  - Primary Key
  - Foreign Key referencing export_goods(region_id)

This ensures:

- Data consistency
- Referential integrity
- Clear visualization in ER diagrams

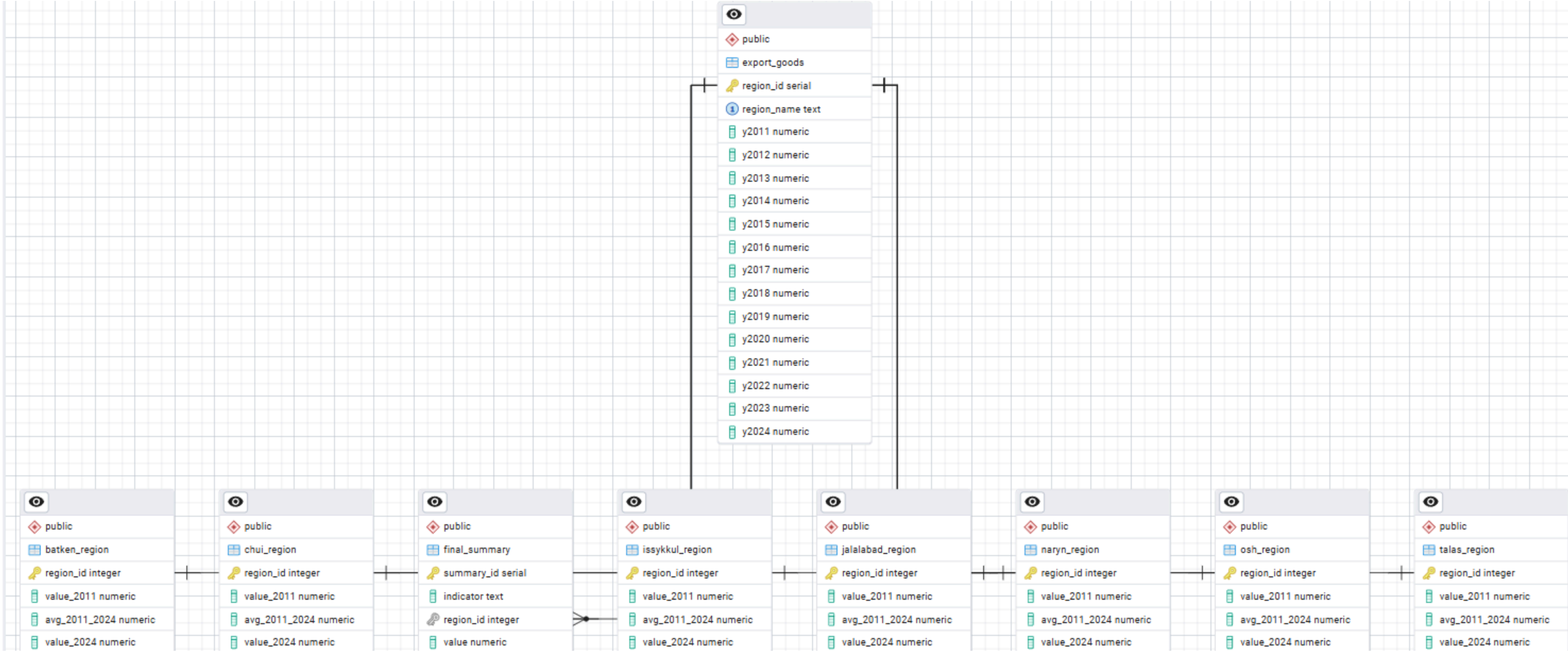
1 Batken	2 Chüy
3 Jalal-Abad	4 Issyk-Kul
5 Naryn	6 Osh
7 Talas	8 Leadership

Data Processing Logic

Steps performed by the SQL code:

1. Create all tables
2. Insert raw export data
3. Calculate average values per region
4. Insert regional indicators into regional tables
5. Calculate maximum values across all regions
6. Store statistical results in final_summary

ER Diagram and Visualization



ADVANTAGES OF THE PROJECT

Clear separation of data

Logical table relationships

Correct use of primary and foreign keys

SQL-based data analysis

Scalable design for future years or regions

Thank you for your attention