**Infrastructure for Busses**

**Developed by Vladislav Zhivkov**

**Assignment**

**To design and implement a database for BUS TRANSPORTATION, which will store the following information:**

* Schedule - destination, date, time, price, number, places;
* Client - name, phone number;
* Tickets - type, destination, price;
* Reservations - destination, date, time, price, employee;

**Rules:**

* Each customer can purchase/book more than one ticket
* There are many means of transport to each destination

**The database must be normalized and allow:**

1. **Data entry and corrections.**
2. **Search/Reverberations/Purchase tickets by destination, date, and time.**
3. **References to:**

* Sold tickets for a customer.
* Vacancies for destination/date/time.
* Sales for a period sorted by date.

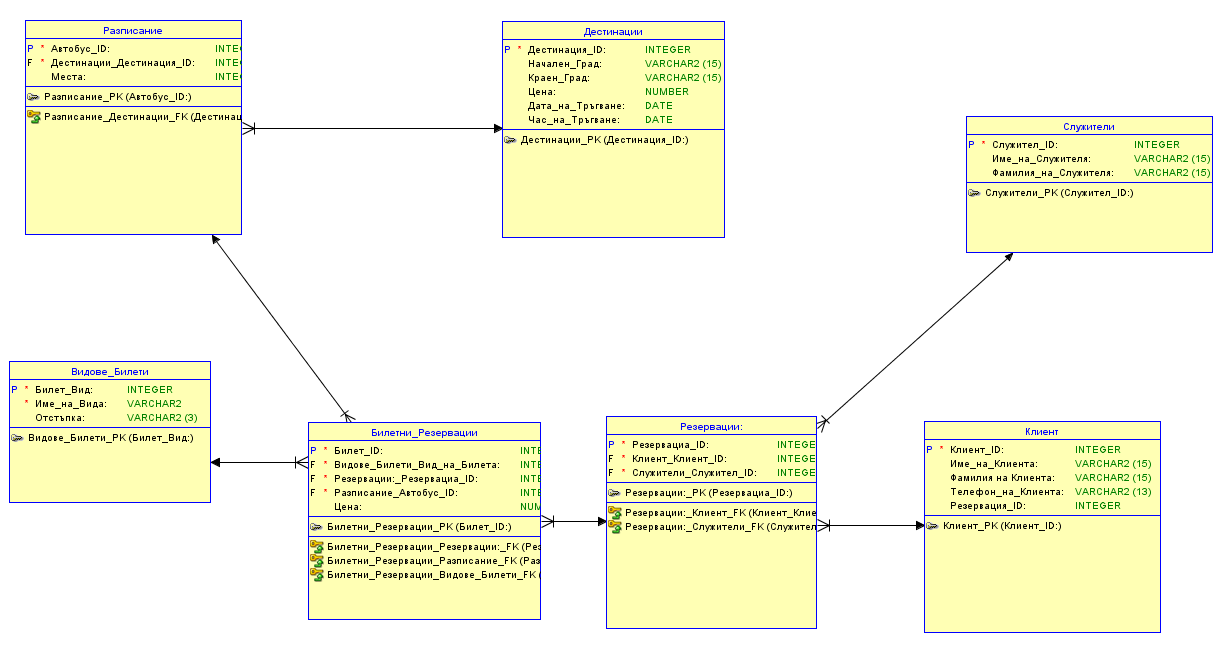
**Top 5 ranking by the number of tickets per customer.**

**An explanatory note to the implemented project must contain:**

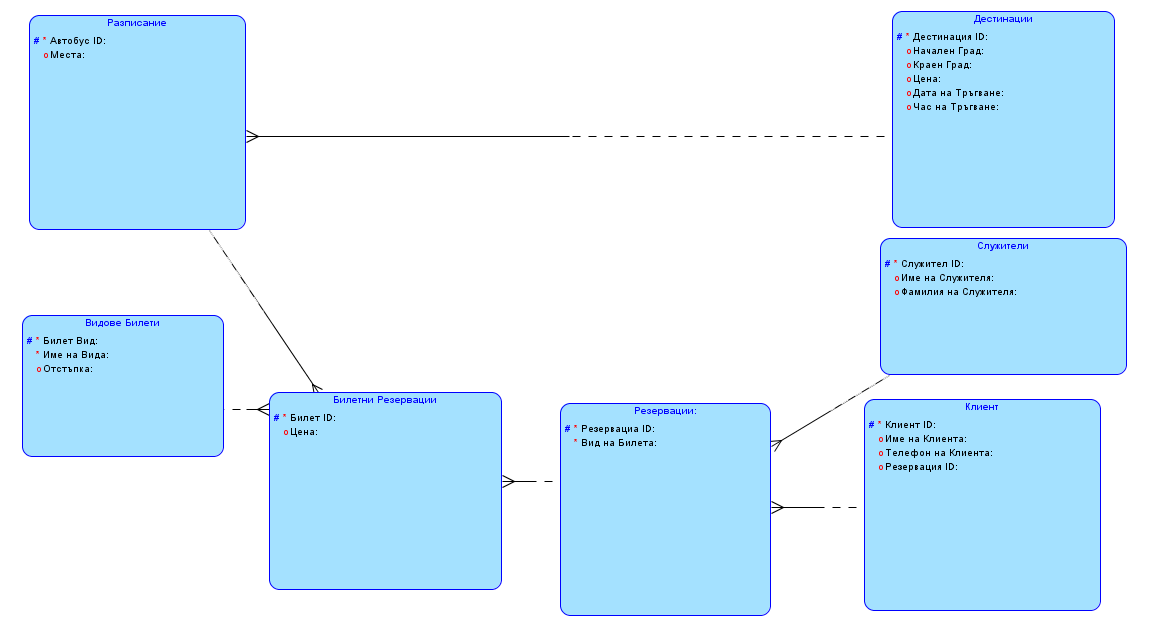
* **Models (Oracle Data Modeler)**
* **Sample Data**
* **SQL commands – DDL, DML**
* **Results of the execution of requests.**

**1. Tables Creation:**

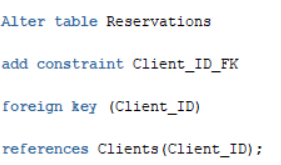
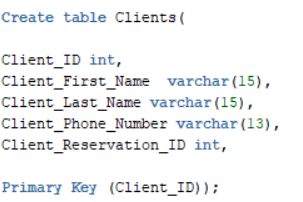
1.1 Logical Model

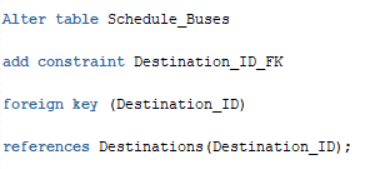
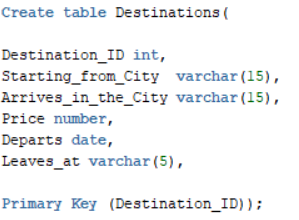
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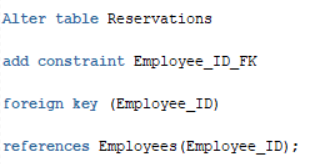
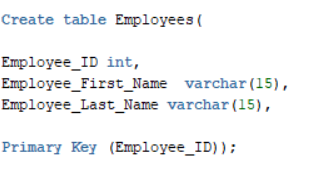
1.2 Relations Model

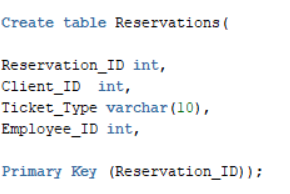
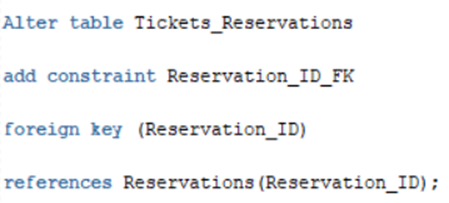


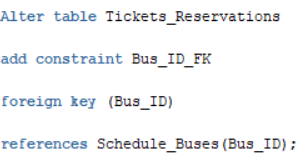
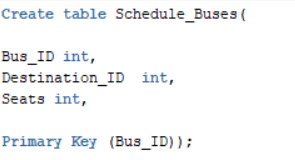
1.3 Development of the tables:

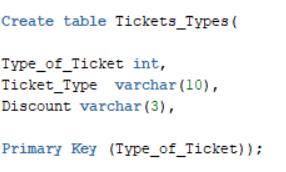
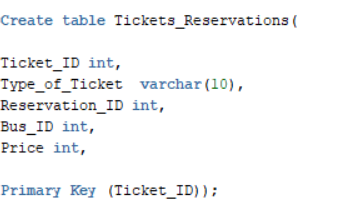






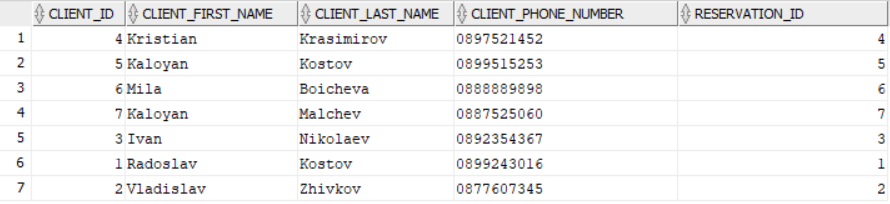
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**2. Exemplary Data**

2.1 CLIENTS



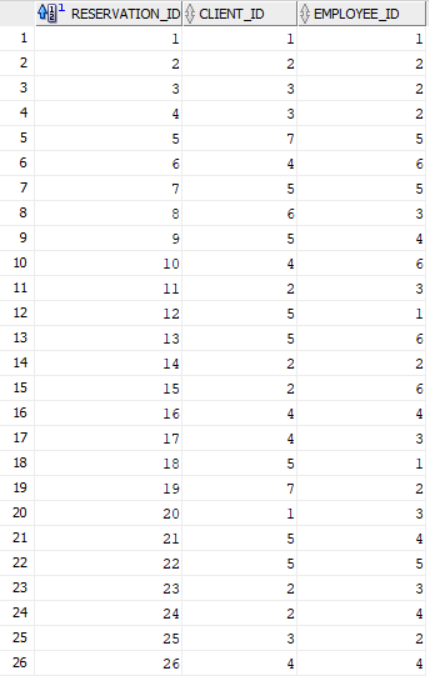
2.2 DESTINATIONS



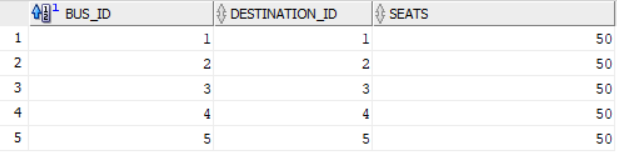
2.3 EMPLOYEES



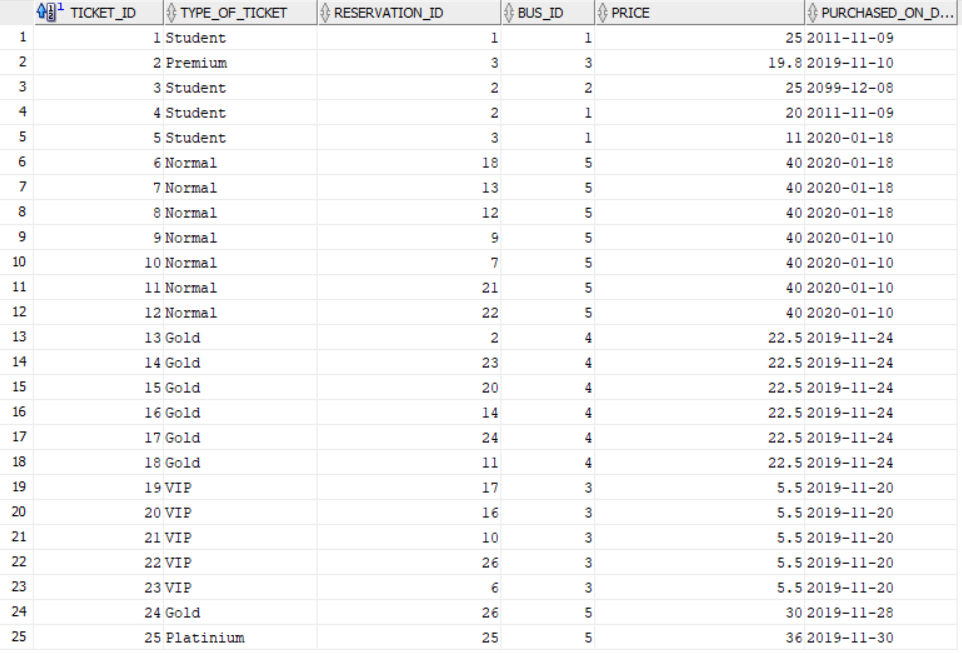
2.4 RESERVATIONS



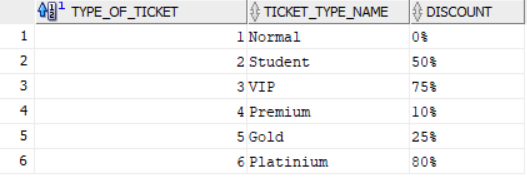
2.5 SCHEDULE\_BUSES



2.6 TICKETS\_RESERVATIONS



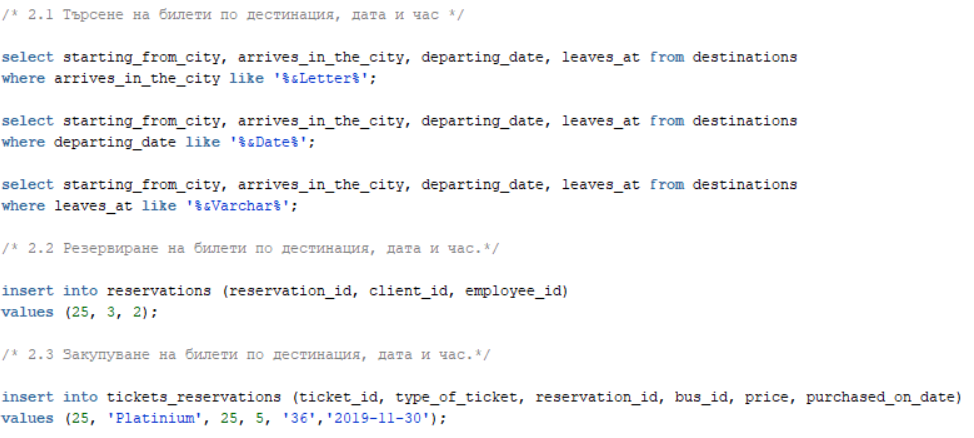
2.7 TICKETS\_TYPES



**1. Adding and updating the data:**



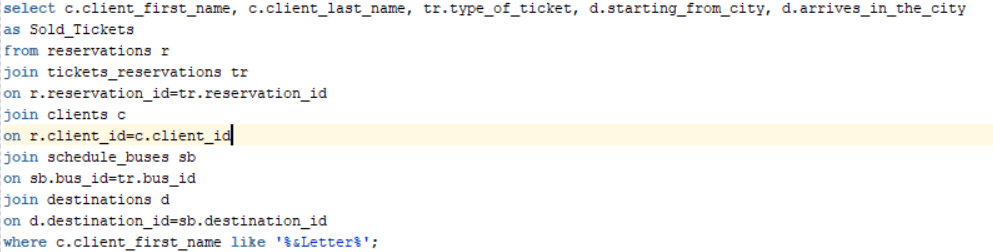
**2. Searches/Reservations/Purchases of tickets by destination, date, and time.**

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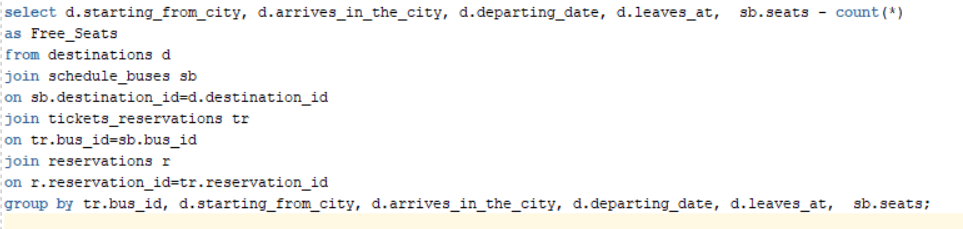
**3. References:**

3.1 Used commands:

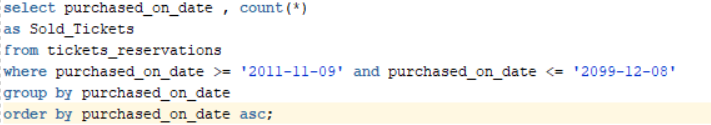
3.1.1 Sold tickets per client:

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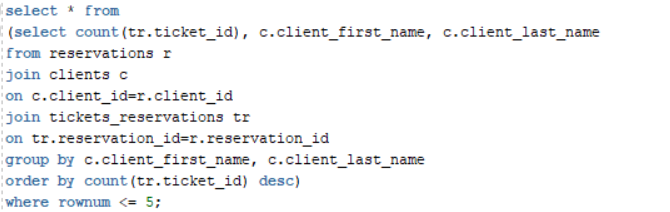
3.1.2 Free seats for destination/data/time:

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3.1.3 Sales for a period, sorted by dates:

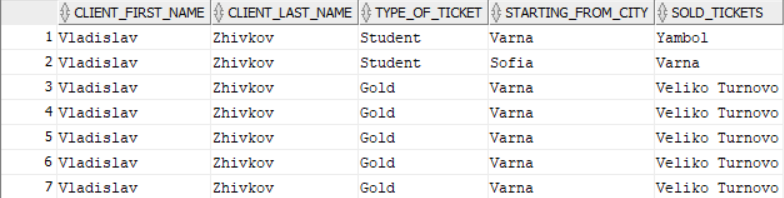
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3.1.4 Top 5 rankings for sold tickets to a client:

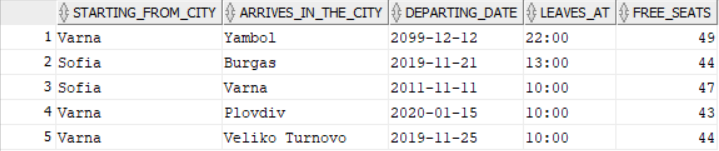
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3.2 Results:

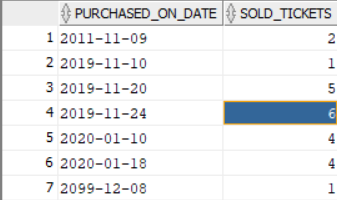
3.2.1 Tickets sold for a customer by Name:

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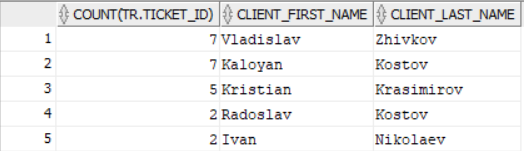
3.2.2 Free seats for destination/data/time:

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3.2.3 Sales for a period, sorted by dates:

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3.2.4 Top 5 rankings for sold tickets to a client:

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