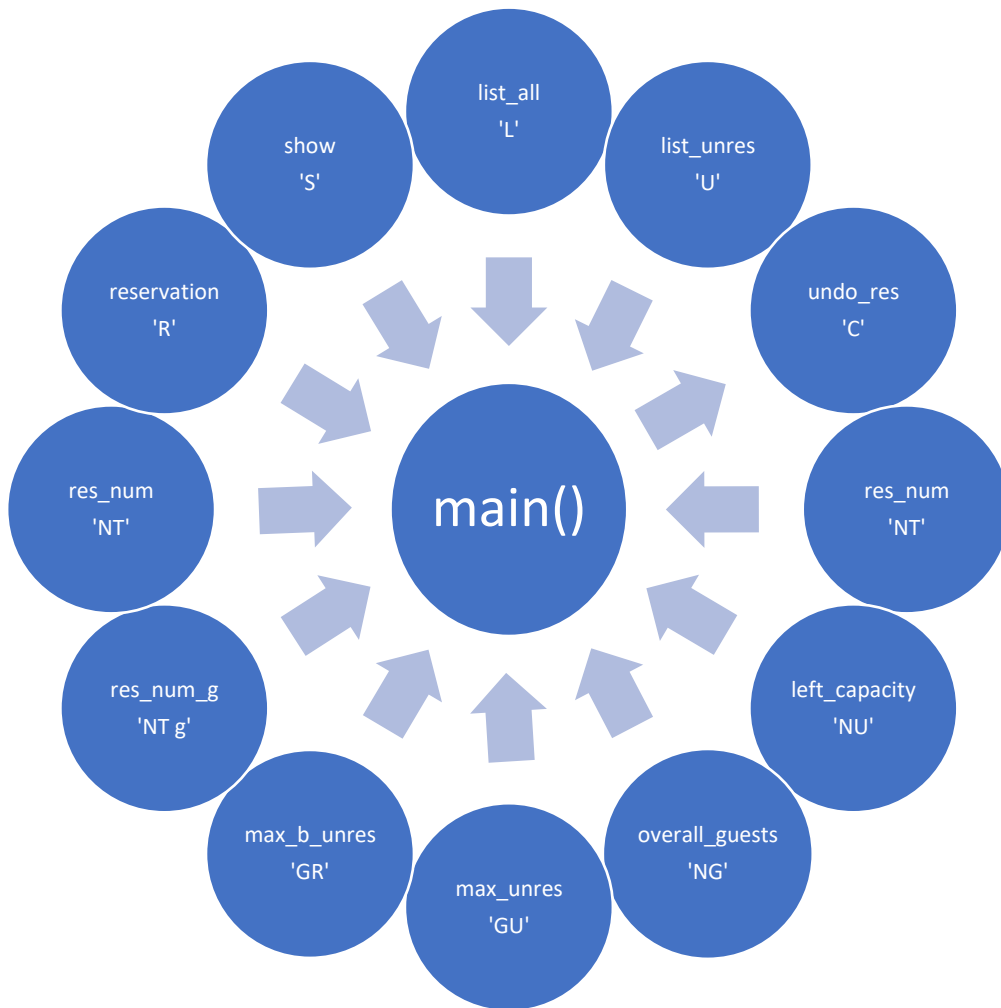


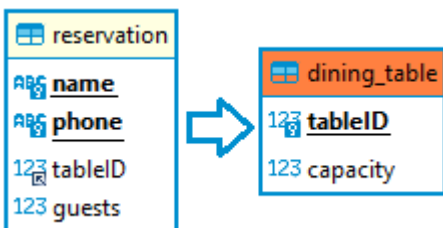
Structure



The structure of the functions is quite simple: there is a **main** function that starts a **while** loop and requires an input (string) from the user. As long as the string is different from 'X', the while loop will continue. In all other cases, a series of **if** structures will check the string and determine which function to call. For every feature from the requirements there is a different function since each one of them is based on a different query sent to the database.

Database Schema

My database only has two tables:



dining_table only contains two columns, representing the identification of the table (tableID, which is the table number and is the only primary key of the table) and the capacity, which is the number of seats of the referred table.

Reservation contains four columns: name, phone (which are both primary keys and represents the name and the phone number of the person who is reserving the table), guests (number of booked seats) and tableID, which is the **foreign key** linking to the **dining_table** relation.

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Notes: *dining_table* is pretty much untouched by functions, since it is only used to run select queries or create views.

Specifications

Software	Version
DBeaver	21.0.1.202103211229
MySQL	8.0
Windows 10 Pro	20H2

Log information about the database should be included in the .py file:

```
host="localhost",  
user="root",  
password="admin",  
database="Project"
```

Notes

I decided to use $n = 10$, since I wanted to have two tables per each capacity from 2 to 6. In other words, two tables with 2 seats, two with 3 seats and so on. Note that the tables are ordered by their maximum number of seats, in ascending order. I did this on purpose, because this way during the table selection phase the reservation(s) function will always select the table with minimum capacity available (yet higher than the number of guests I requested). Example: if someone tries to reserve a table for 2, the software will select the free table with minimum capacity higher or equal to 2, and not just any free table with enough free seats.