

Database Schema

As a database, SQLite3 was used because it is suitable for non-production environments. Connectivity to the database was implemented using SQLAlchemy-Flask, an open source SQL toolkit and object-relational mapper (ORM) for Python. Multiple tables were created and used to store the data, which are joined with the relationships shown in the figure below.

SQLAlchemy was selected to be used because it provides a high-level approach that is simple to implement and helps in developing code quicker. SQLAlchemy, due to its ORM capabilities, acts as a database abstraction layer. This layer sits as an intermediary between the app and the database engine. It allows defining regular Python objects and methods and translates them into low-level SQL database instructions.

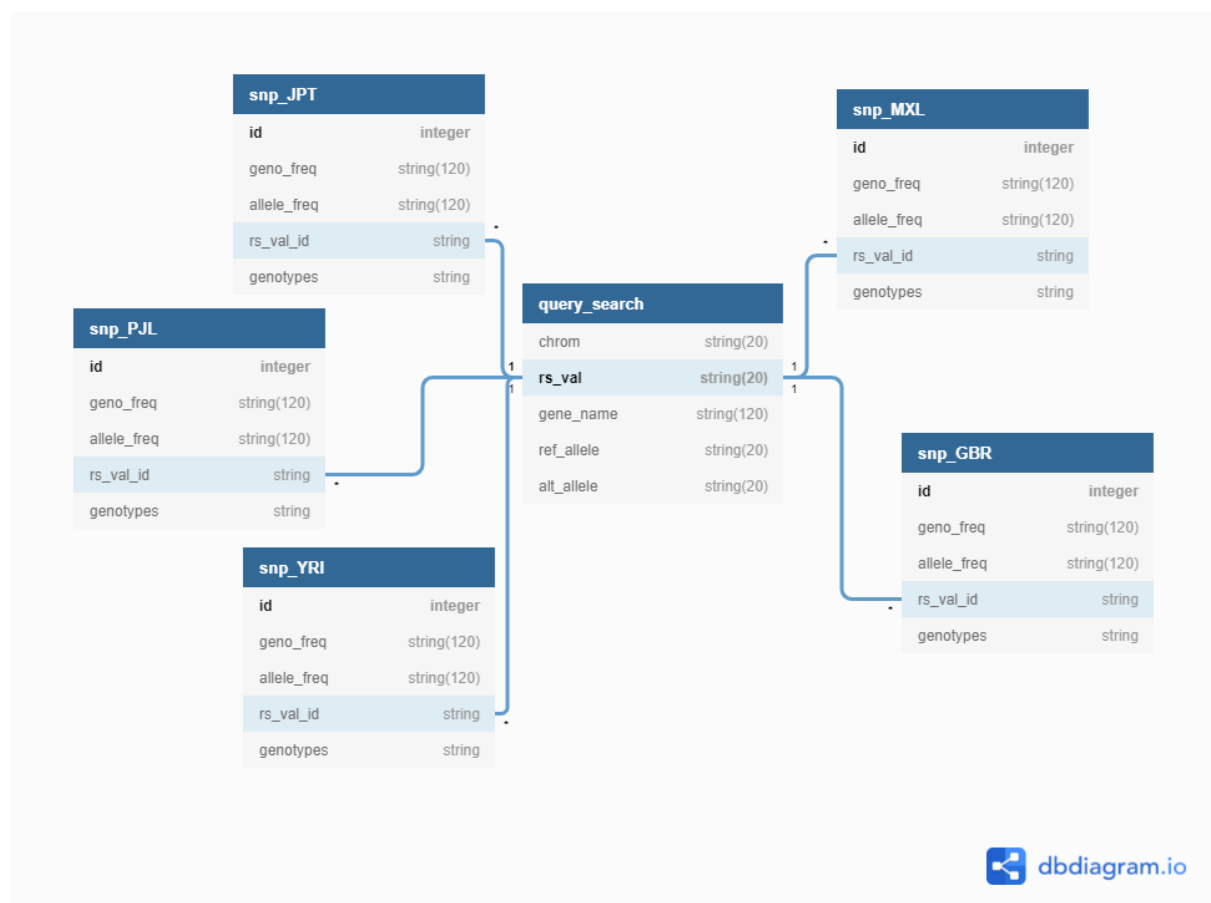


Figure 1. Popgen database schema.