

SQLAlchemy

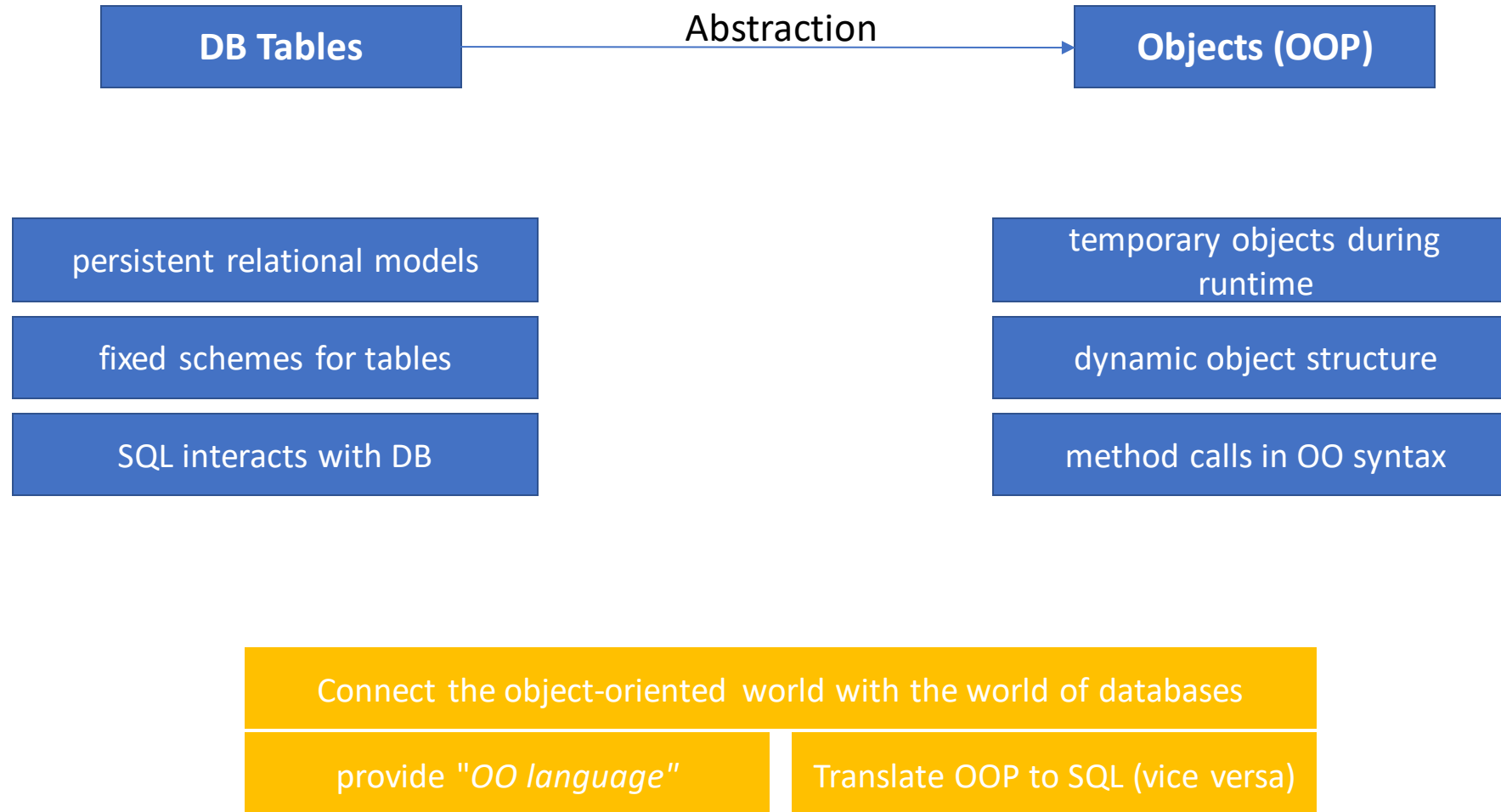
Basics and Relationship Loading

Structure

1. What is SQLAlchemy?
 1. ORM
 2. Structure
2. Relationship Loading
 1. Types of Relationships
 2. Loading Strategies
3. Coding Example
4. Conclusion

What is SQLAlchemy?

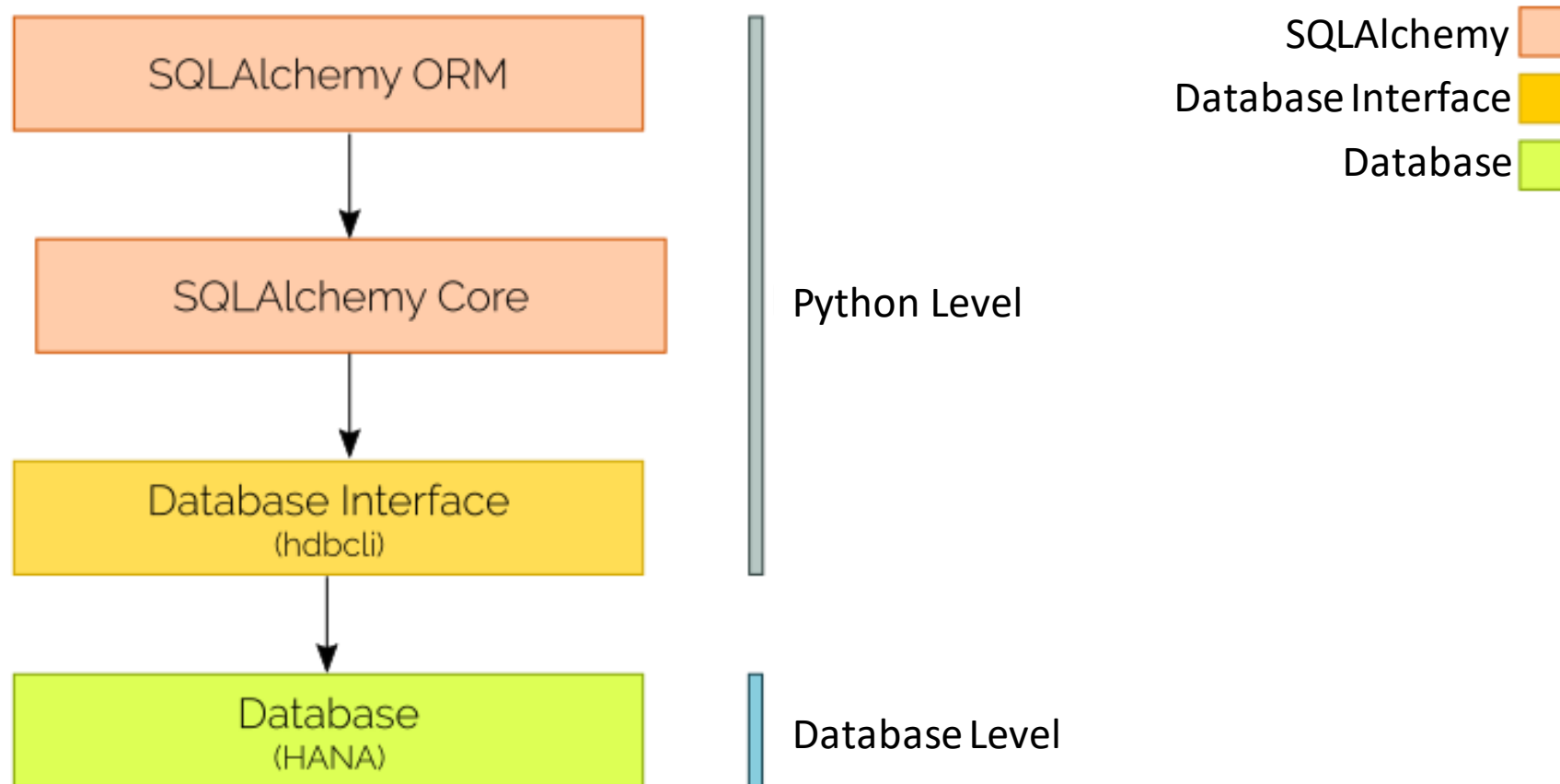
ORM



What is SQLAlchemy?

Structure

Python module containing *SQLAlchemy ORM* & *SQLAlchemy Core*



Relationship Loading

Types of Relationships

One-to-One



One-to-Many
Many-to-One



Many-to-Many



Relationship Loading

Types of Relationships

One-to-One



One-to-Many
Many-to-One



Many-to-Many

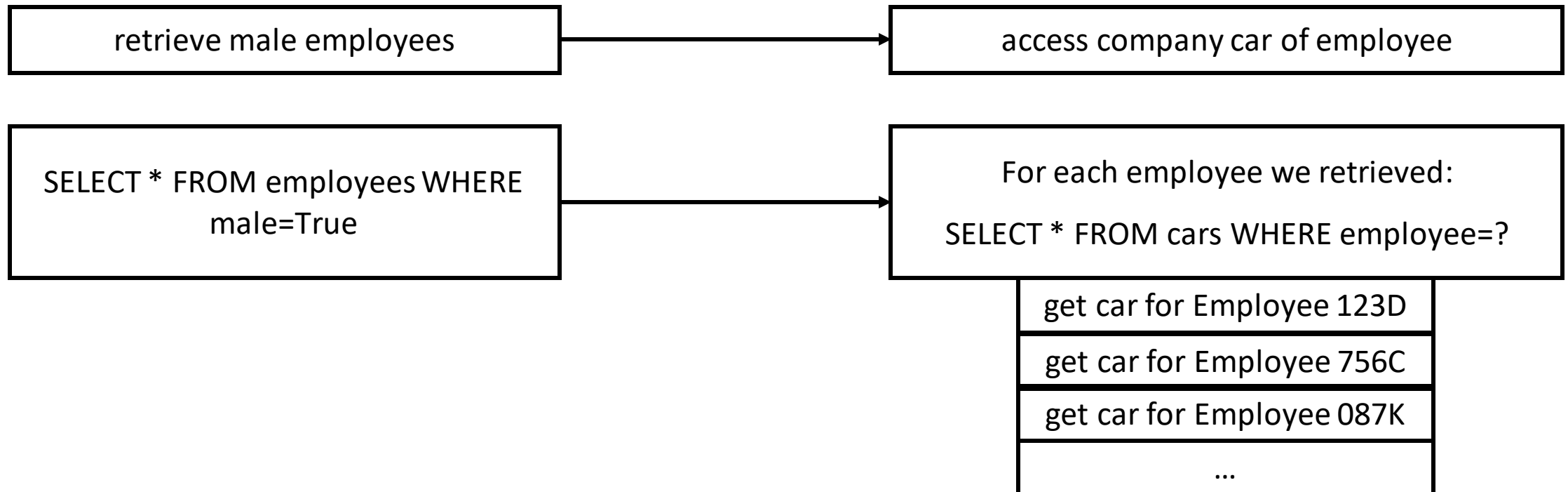


Relationship Loading

Loading Strategies – Lazy Loading

Standard loading option in SQLAlchemy = **lazy loading**

Lazy Loading: retrieving information only when accessed



Relationship Loading

Loading Strategies – Eager Loading

Eager Loading: load relationships instantly

Subquery Eager Loading

retrieve male employees

select all male employees



select all company cars for all male employees

Joined Eager Loading

retrieve male employees

select all male employees **and** join
with company cars

Coding Example

Basics: Table Creation, Transactions | **Relationship Loading**

Conclusion

Relationship Loading

- Lazy Loading vs. Eager Loading
- Subquery Loading vs. Joined Loading

Size matters

- Object mapping is slow
- Only retrieve necessary information