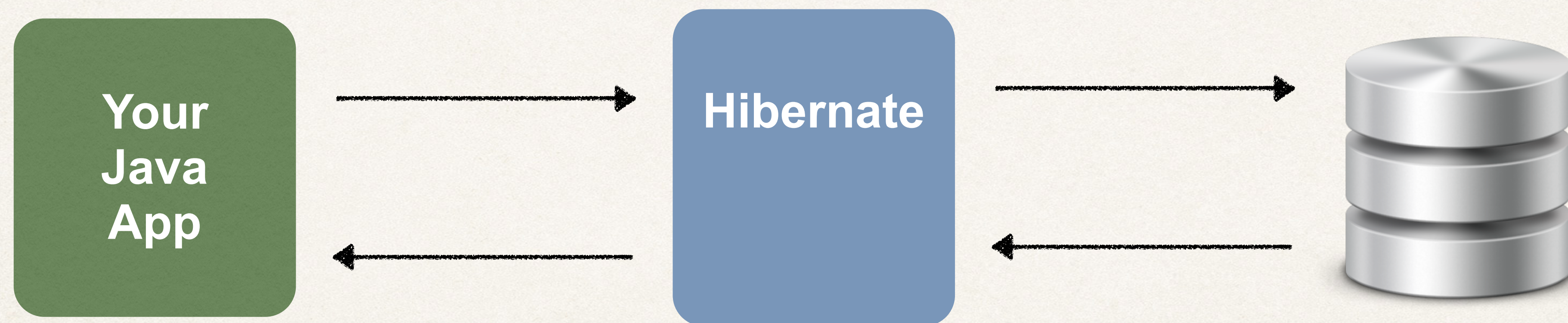# Hibernate Overview

Topics

- What is Hibernate?

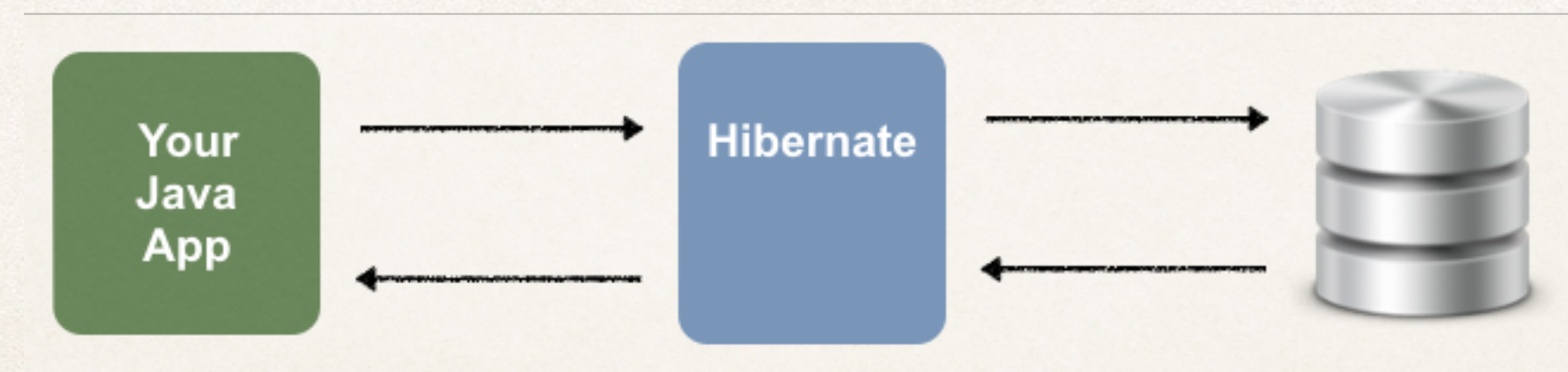- Benefits of Hibernate

- Code Snippets

What is Hibernate?

- A framework for persisting / saving Java objects in a database
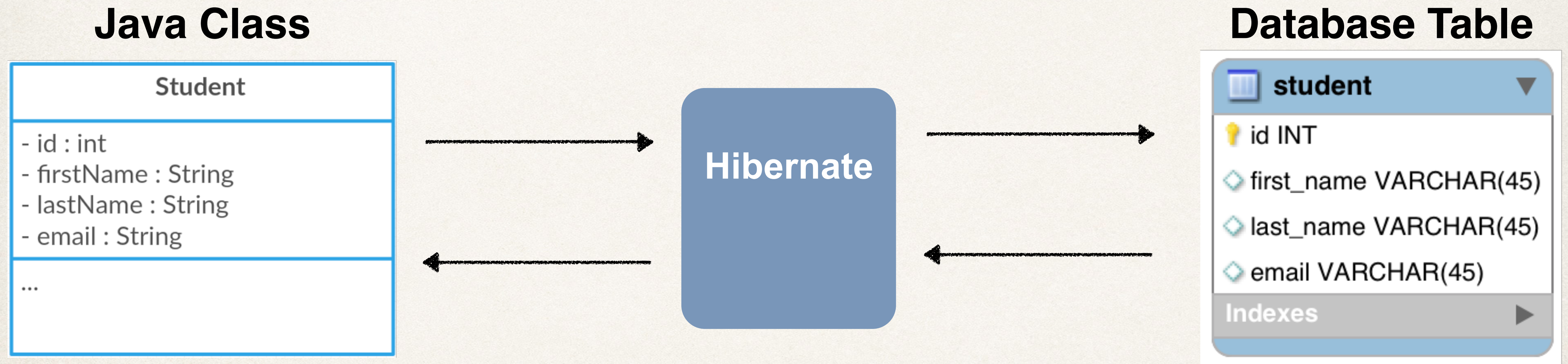
  - www.hibernate.org

Benefits of Hibernate

- Hibernate handles all of the low-level SQL

- Minimizes the amount of JDBC code you have to develop

- Hibernate provides the Object-to-Relational Mapping (ORM)

Object-To-Relational Mapping (ORM)

- The developer defines mapping between Java class and database table

Java Class

Student
- id : int - firstName : String - lastName : String - email : String
...

Hibernate

Database Table

🗔 **student** ▼
🔑 id INT
◇ first_name VARCHAR(45)
◇ last_name VARCHAR(45)
◇ email VARCHAR(45)
Indexes ▶

luv2code

Saving a Java Object with Hibernate

```java
// create Java object
Student theStudent = new Student("John", "Doe", "john@luv2code.com");

// save it to database
int theId = (Integer) session.save(theStudent);
```

Retrieving a Java Object with Hibernate

```java
// create Java object
Student theStudent = new Student("John", "Doe", "john@luv2code.com");

// save it to database
int theId = (Integer) session.save(theStudent);

// now retrieve from database using the primary key
Student myStudent = session.get(Student.class, theId);
```
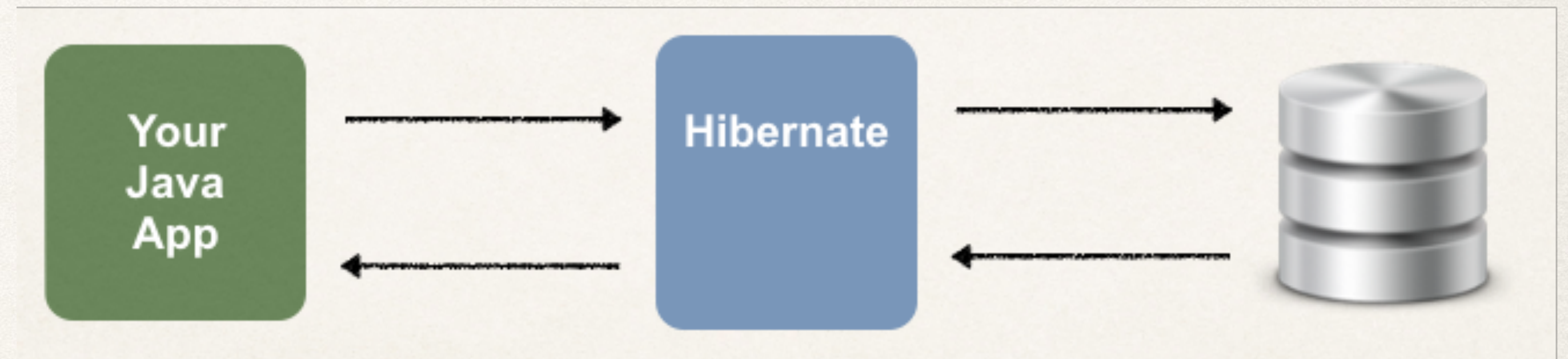
Querying for Java Objects

```java
Query query = session.createQuery("from Student");

List<Student> students= query.list();
```

Hibernate CRUD Apps

- **C**reate objects

- **R**ead objects

- **U**pdate objects

- **D**elete objects

Hibernate is actually more than ORM!

Hibernate. Everything data.

Hibernate Search 5.6.0.Alpha2 introduces Elasticsearch integration

More news

Hibernate ORM
Domain model persistence for relational databases

More ➔

Hibernate Search
Full-text search for your domain model

More ➔

Hibernate Validator
Annotation based constraints for your domain model

More ➔

Hibernate OGM
Domain model persistence for NoSQL datastores

More ➔

Hibernate Tools
Command line tools and IDE plugins for your Hibernate usages

More ➔

Others
We like the symmetry, everything else is here

Even more ➔

Hibernate Overview