

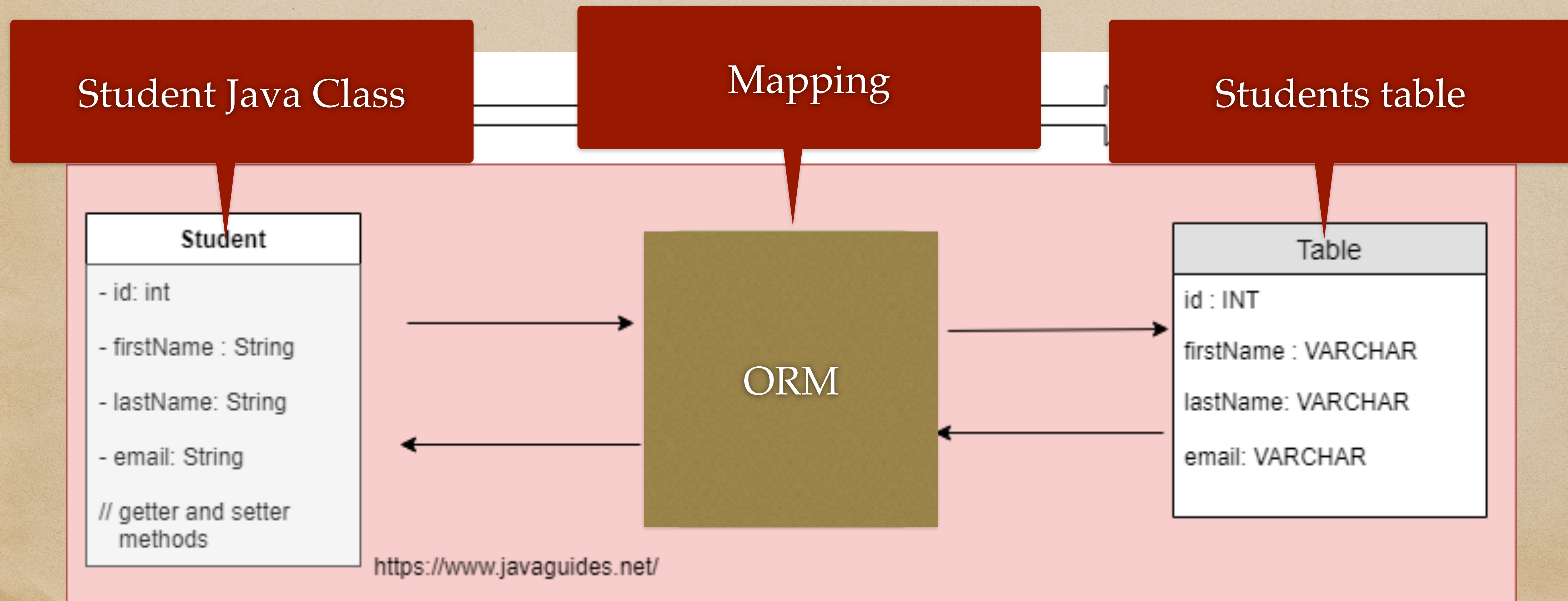
# ORM, JPA, Hibernate

By Ramesh Fadatare (Java Guides)



# ORM (Object Relational Mapping)

Object-relational mapping or ORM is the programming technique to map application domain model objects to the relational database tables.





```

@Entity
@Table(name="addresses")
public class Address {

    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name="id")
    private Long id;

    @Column(name="street")
    private String street;

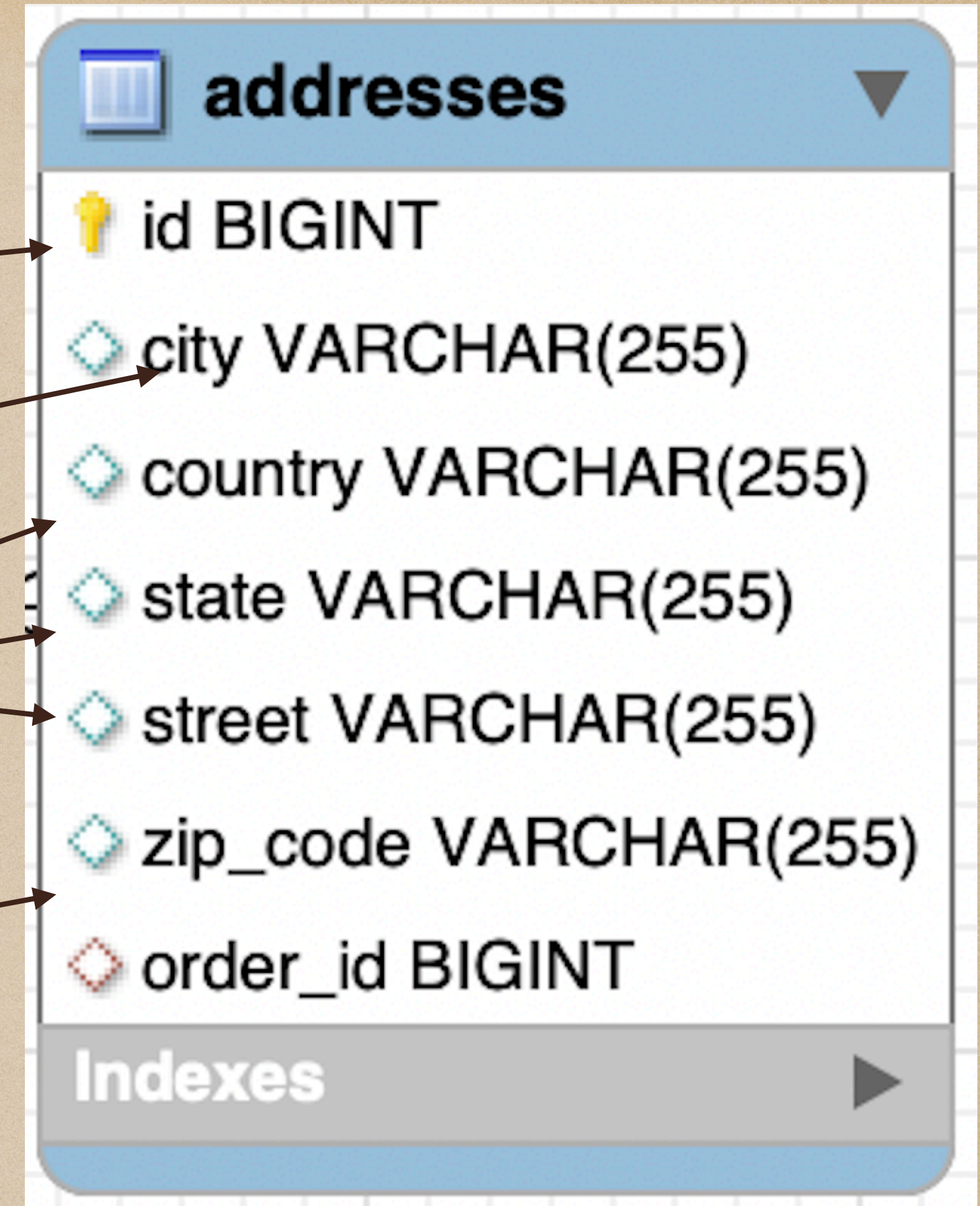
    @Column(name="city")
    private String city;

    @Column(name="state")
    private String state;

    @Column(name="country")
    private String country;

    @Column(name="zip_code")
    private String zipCode;
}

```



```

Address address = new Address();
address.setCity("Pune");
address.setStreet("Kothrud");
address.setState("Maharashtra");
address.setCountry("India");
address.setZipCode("411047");

```

	id	city	country	state	street	zip_code
	2	Pune	India	Maharashtra	Kothrud	411047
	3	Pune	India	Maharashtra	Kothrud	411047



# JPA (Jakarta Persistence API)

Jakarta Persistence (JPA), formerly known as Java Persistence API.

JPA is just a specification that facilitates object-relational mapping to manage relational data in Java applications. It provides a platform to work directly with objects instead of using SQL statements.



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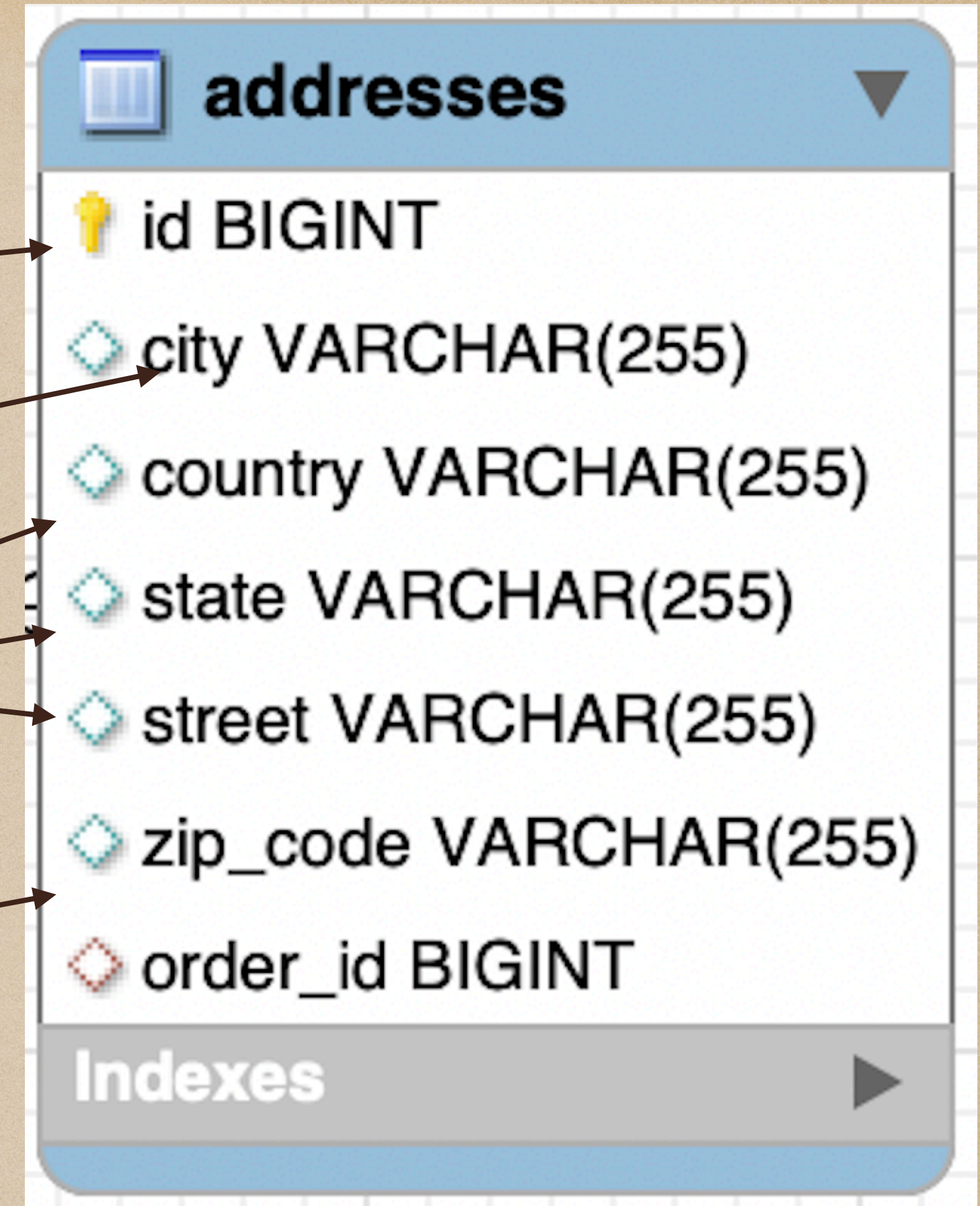
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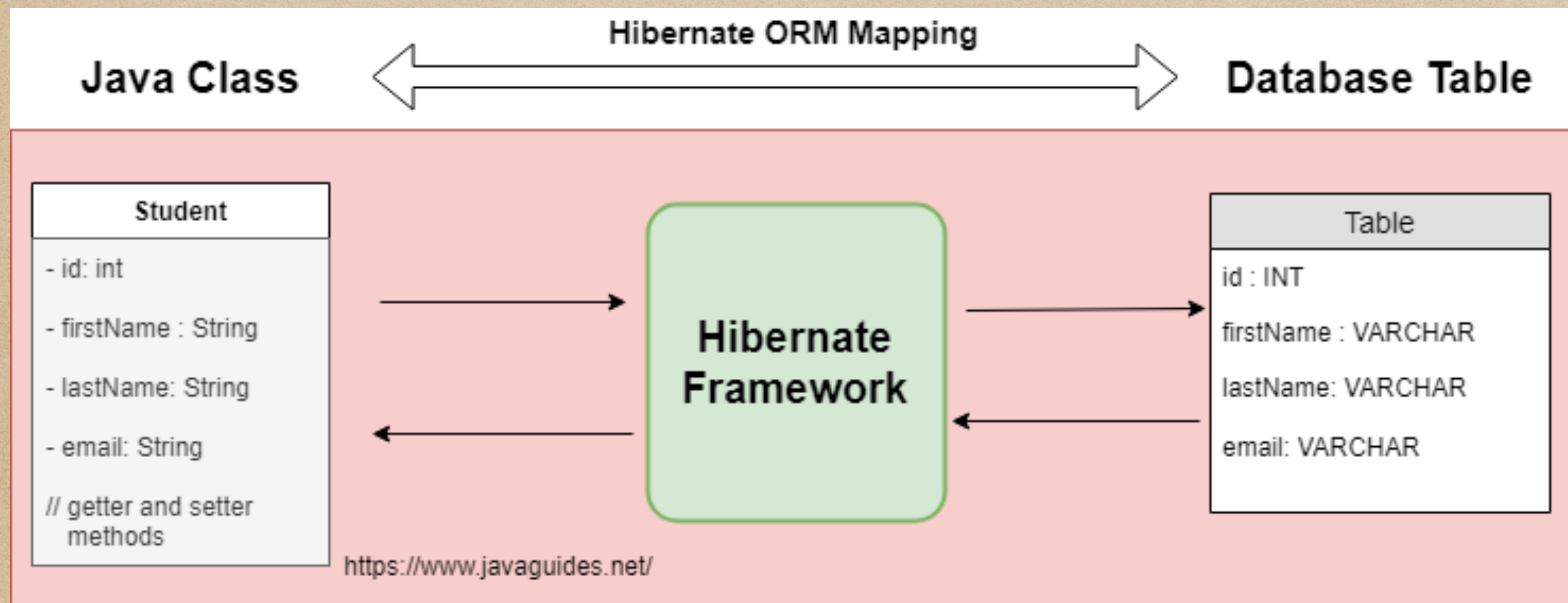
	id	city	country	state	street	zip_code
	2	Pune	India	Maharashtra	Kothrud	411047
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# Hibernate ORM Framework

Hibernate is a java based ORM tool that provides a framework for mapping application domain objects to the relational database tables and vice versa.

Hibernate provides JPA implementation that maps your database records to Java objects and generates the required SQL statements to replicate all operations to the database.



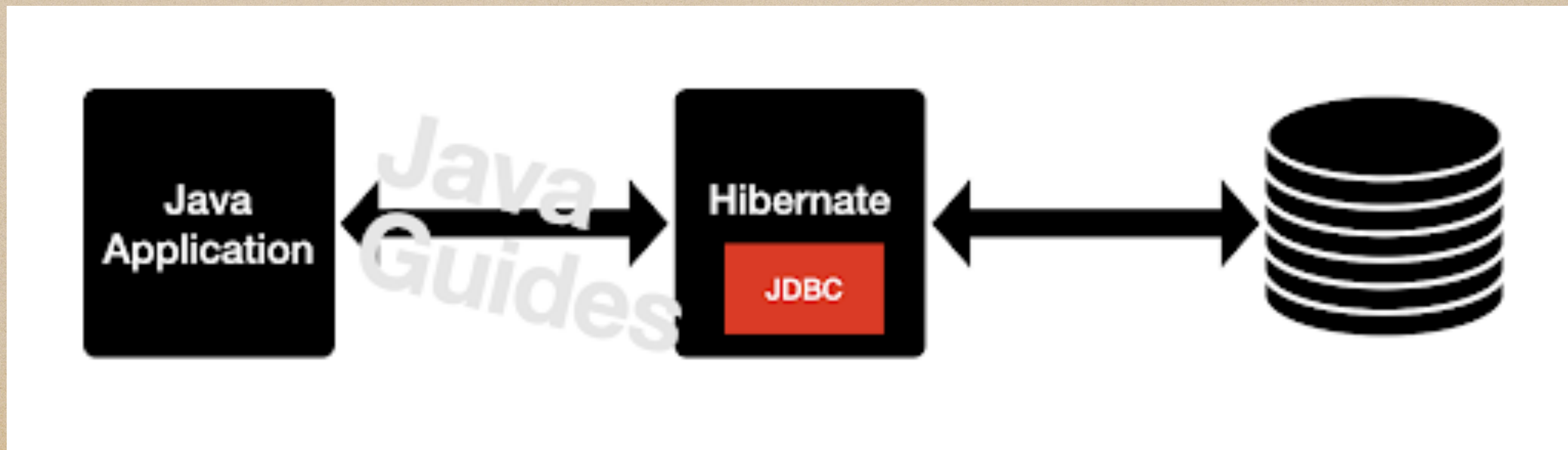
Hibernate is a JPA  
Implementation



# Hibernate ORM Framework

Hibernate uses JDBC for all database communications. Hibernate uses JDBC to interact with the database.

Hibernate acts as an additional layer on top of JDBC and enables you to implement a database-independent persistence layer:





# Hibernate ORM Framework

