What is Hibernate?

- It is open source object-relational mapping (ORM) for Java.

- Hibernate is responsible for making data persistent by storing it in a database.

- It uses POJO objects (Plain Old Java Objects)
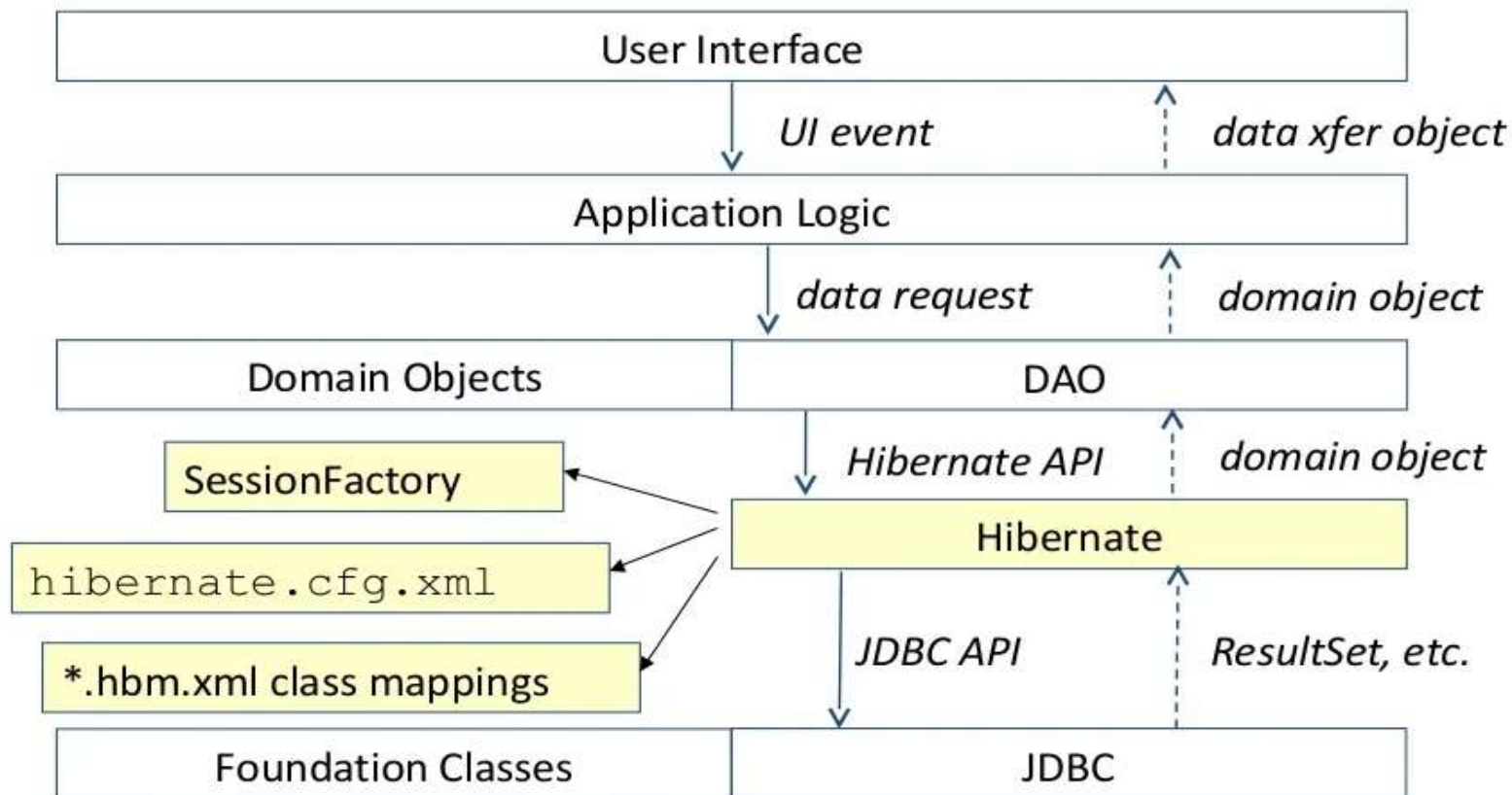
- No direct interaction with the database.

Hibernate Features

- O-R mapping using ordinary JavaBeans

- Can set attributes using *private* fields or *private* setter methods

- Lazy instantiation of collections (configurable)

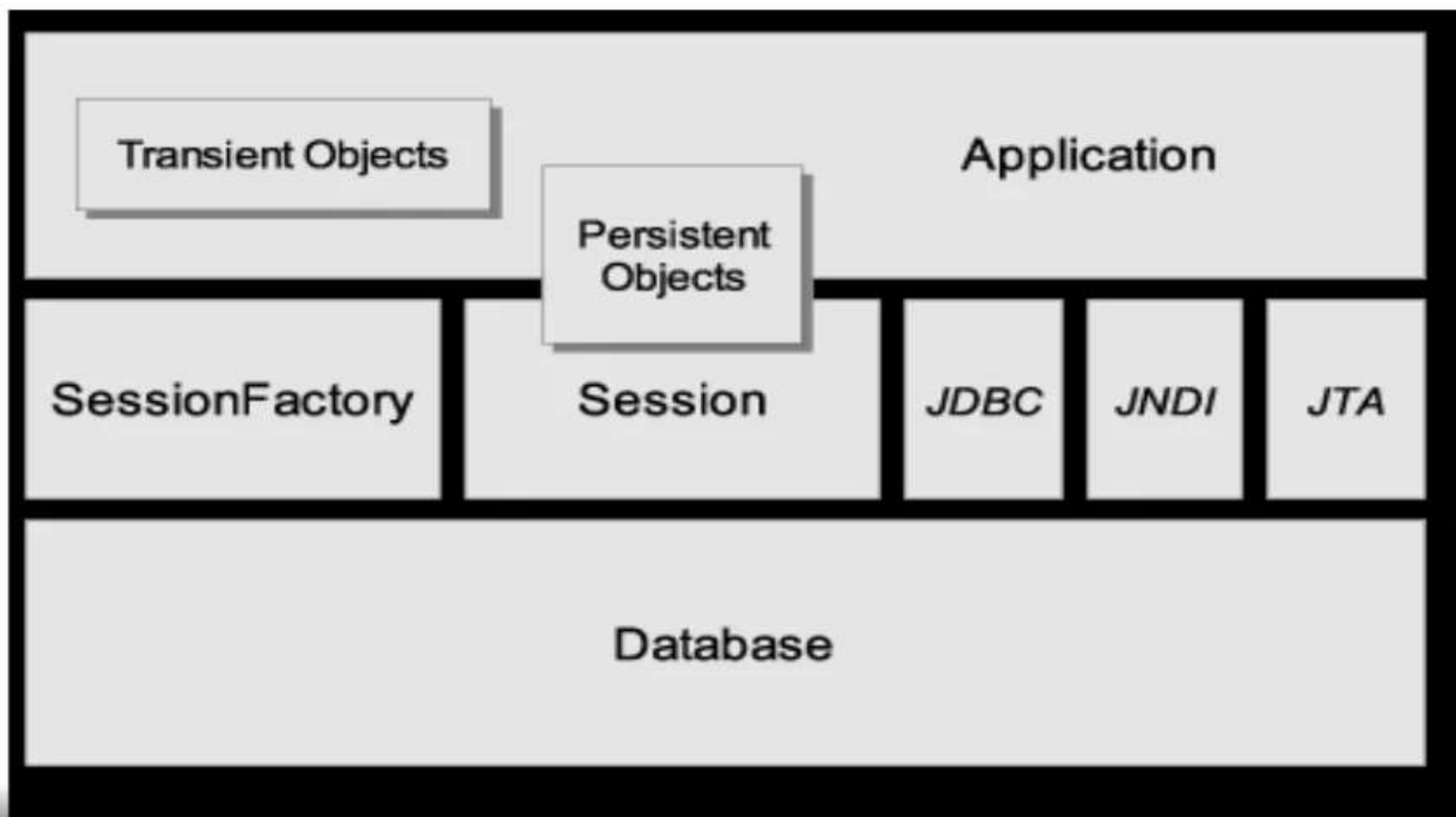- Polymorphic queries, object-oriented query language

Continued....

- Cascading persist & retrieve for associations, including collections and many-to-many

- Transaction management with rollback

- Can integrate with other container-provided services

Application Architecture

User Interface

UI event   data xfer object

Application Logic

data request   domain object

Domain Objects	DAO

Hibernate API   domain object

SessionFactory

Hibernate

`hibernate.cfg.xml`

*.hbm.xml class mappings

JDBC API   ResultSet, etc.

Foundation Classes	JDBC

Another View

Hibernate communication with RDBMS

➢ General steps:

1. Load the Hibernate configuration file and create configuration object. It will automatically load all hbm mapping files.

2. Create session factory from configuration object

3. Get one session from this session factory.

4. Create HQL query.

5. Execute query to get list containing Java objects.

ADVANTAGE OF HIBERNATE

1) Relational Persistence for JAVA

2) Transparent Persistence

3) Support for Query Language

4) Database Dependent Code

5) Maintenance Cost

6) Optimize Performance

7) Automatic Versioning and Time Stamping

8) Open-Source, Zero-Cost Product License

DISADVANTAGE OF HIBERNATE

1) Steep learning curve.

2) Use of Hibernate is an overhead for the applications which are :

• simple and use one database that never change

• need to put data to database tables, no further SQL queries

• there are no objects which are mapped to two different tables

Continued....

Hibernate increases extra layers and complexity. So for these types of applications JDBC is the best choice.

3) Support for Hibernate on Internet is not sufficient.

4) Anybody wanting to maintain application using Hibernate will need to know Hibernate.

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5) For complex data, mapping from Object-to-tables and vise versa reduces performance and increases time of conversion.

6) Hibernate does not allow some type of queries which are supported by JDBC. For example It does not allow to insert multiple objects (persistent data) to same table using single query. Developer has to write separate query to insert each object.

Thank You!!