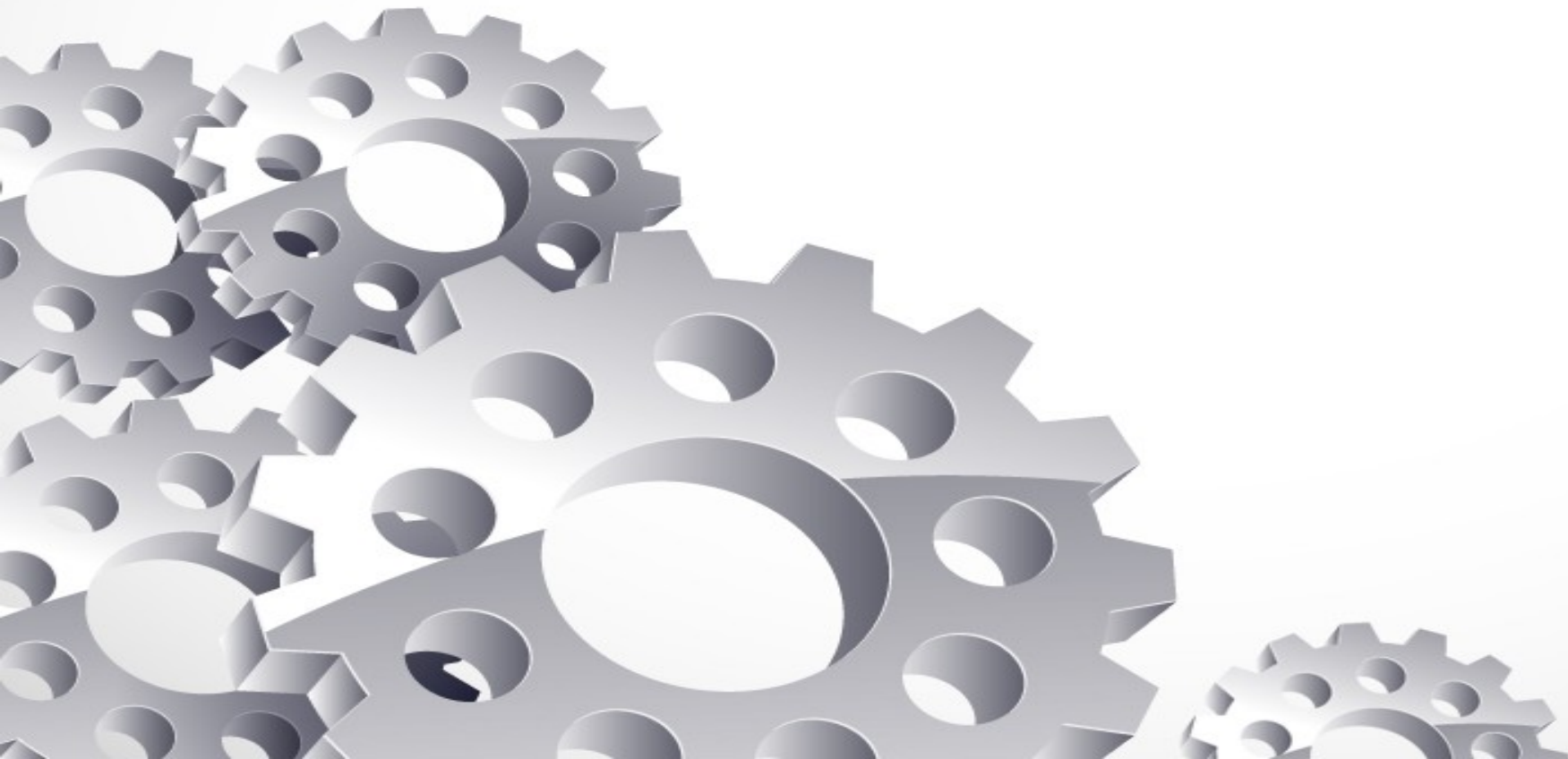



**HIBERNATE**



- 
- What is Persistence?
  - What is JDBC?
  - What is ORM?
  - What is Hibernate?
  - What is JPA?

# CONTENTS IN HIBERNATE COURSE

- Basic Annotations (Entity, Table, Id, Column etc.)
- Embeddable annotation
- OneToOne relation
- OneToMany, ManyToOne relation
- ManyToMany relation

# CONTENTS - CONTINUE



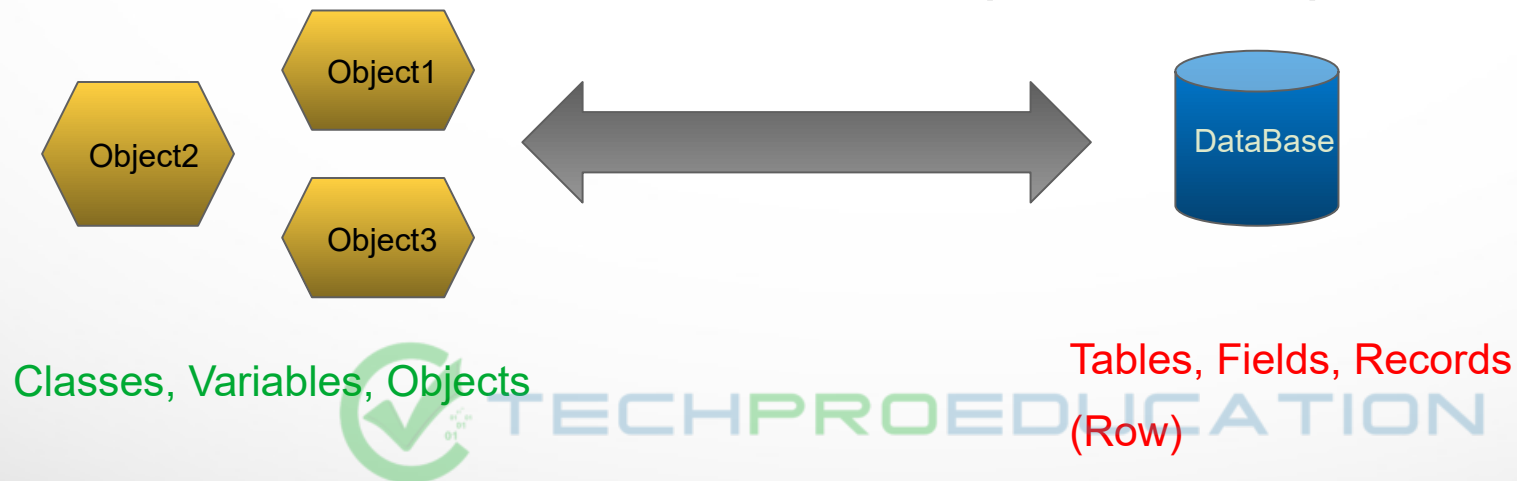
- Fetch Types (LAZY, EAGER)
- First level ve Second Level Caches
- Hibernate Query Language (HQL)
- Details of the Get and Load method
- Hibernate Lifecycle, States: Transient, Persistent, Detached, Removed
- Hibernate Session and JPA EntityManager

# INTRO TO HIBERNATE

- OOP (Object Oriented Programming) languages (Java, C#, C++)
- Need for storing (persistence) data
  - Persistence means :you make the data permanent
- Databases and Relational Database Management System (RDBMS)
- MYSQL, PostgreSQL, SQL Server, Oracle etc.

# INTRO TO HIBERNATE

- JDBC: Java Database Connectivity API
- ORM Object Relational Mapping
  - It is solution to handle persistent data
- ORM tools and interact with RDBMS without writing more SQL
- ORM framework / tools: Hibernate, EclipseLink, TopLink, IBatis etc.



# INTRO TO HIBERNATE



- JPA (Java Persistence API)
  - JPA is a specification
  - (JPA is the dance, Hibernate is the dancer.)
  - Hibernate is a super set of the JPA.
  - Hibernate has more features besides JPA has.
  - Hibernate is the most popular ORM Framework that implements JPA
  - Hibernate and JPA can't be compared directly and they are not competitors.
  - The Java Persistence API (JPA) renamed Jakarta Persistence in 2019.

# INTRO TO HIBERNATE



- Creating maven project
  - Maven dependencies
    - `<dependency>`
    - `<groupId>org.hibernate</groupId>`
    - `<artifactId>hibernate-core</artifactId>`
    - `<version>5.6.8.Final</version>`
    - `</dependency>`
  
    - `<dependency>`
    - `<groupId>mysql</groupId>`
    - `<artifactId>mysql-connector-java</artifactId>`
    - `<version>8.0.27</version>`
    - `</dependency>`



# INTRO TO HIBERNATE



- Creating hibernate configuration file

- hibernate.connection.driver\_class:
  - com.mysql.jdbc.Driver (it changes depending on database type)
- Database connection configuration:
  - connection.url: jdbc:mysql://localhost:3306/db\_name
  - connection.username: db\_username
  - connection.password: db\_password
  - hibernate.dialect: (it changes depending on database type)
    - org.hibernate.dialect.MySQL8Dialect
- hbm2ddl.auto:
  - Create | update | create-drop | validate | none
- show\_sql:
  - true | false
- format\_sql:
  - true | false

