

Hibernate is ORM framework

ORM = translating from object to table !!!

hibernate.cfg.xml = connectivity details , connection pool details, names of the mapping classes , other settings

Annotations for mapping class and table --- @Entity, @Id, @Column !!! !!!

This can be done using xml also --- hibernate.hbm.xml

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### Entity Life Cycle

New Entity()	Transient state	Object is on the heap, reachable , not in persistence context
save(obj) , saveOrUpdate(o bj)	Persistent state	Object is on the heap, reachable , persistence context is tracking it
Obj = find(...)	Persistent state	Object is on the heap, reachable , persistence context is tracking it
delete(obj)	Removed state	Object may be on the heap ,persistence context has discarded it and removed corresponding row in the table , whenever it is unreachable then GC will remove it
session.evict(ob j) session.close()	Detached state	Object is on the heap, reachable , not in persistence context
session.merge(o bj) Session.update( obj)	Persistent state	Object is on the heap, reachable , persistence context is tracking it

(R and D ) ----- when the object moves from transient to persistent state or detached to persistent state is a new object created ??? ?!!!!

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Integrate Hibernate with Web application !!!!!

1. Dynamic Web Project !!!
2. Servlet -----DAO -----hibernate session ----- insert record in the table
3. Hibernate.cfg.xml } src
4. Entity = src ----package
5. Hibernate session creation, ....DAO
6. Build path ---jars
7. Web-inf/lib ----- all hibernate jars + connector jar + .....

WHEN **Eclipse** needs the JARS for compilation of the classes !!! = Use **Build PATH**

When **tomcat** needs the JARS for deployment and execution !!! = Add the jars to **WEB-INF/lib**

URL	JSP
Submit	Servlet---->DAO ----->DB

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Hibernate can deal with 2 types of queries ---

1. SQL = Native queries  
SQL -----uses DB tables
2. **HQL = Hibernate Query Language !!!**  
HQL ---- uses Java CLASSES

[Chapter 15. HQL: The Hibernate Query Language \(nhibernate.info\)](http://nhibernate.info)

HW --- do the crud operation on Product table as a WEB application as discussed in class using DAO