**Hibernate**

1. **ORM:** object relational mapping this is concept used to connect the object to relational database. Orm tools are Hibernate**,** Castor, TopLink ,Spring Dao,

it done the mapping between object world and relational world.

1. **Prerequisites :** basic java and basic sql.
2. **JPA :** java persistence api
3. **hibernate.cfg.xml file** required to connect object to database

<property name=*"hbm2ddl.auto"*>update</property>

**used to create or update the tables if this property is create than this will create new table every time**

<property name=*"show\_sql"*>true</property> this property used to show the sql query

1. @Entity

Tag used to create the entity of bean class and this is

1. **@Id** tag used to create primary key

Configuration con = **new** Configuration().configure().addAnnotatedClass(Student.**class**);

SessionFactory sf = con.~~buildSessionFactory~~();

Session session = sf.openSession();

Transaction tr = session.beginTransaction();

session.save(st);

tr.commit();

1. **Annotation:**

**@Table(name=”student”)** ::used to change the table name

**@Column(name=”stu\_name”) ::**used to change the name of column

**@Transient ::** if mark tag as a @transient then value will we null

1. **Session.**save used to save data into the data into database
2. How to fetch the data from database ::

Studentt st = (Student) session.get(Student.**class**,105);

1. @Embadable :: is used to embaded the object to another table

Example my name have first middle and last word so will create the one more class as name and embaded into the another class and put the data into same table.

1. Relationship
   1. One to one
   2. One to many
   3. Many to many
2. Eiger and lazy :: by default hibernate is lazy
3. Fetch = FetchType.EAGER
4. Caching

**First level cache :** if I am using same query in same session than this will not hit database 2nd time called first level cache

**Second level cache :** we have to use third party lib ex- **ehcache**

For second level cache required two lib **one is ehcache** and **second is hibernate-ehcache**

And need to change in configuration file

**<property name=”hibernate.cache.use\_second\_level\_cache”>true</property>**

And provider class as well in configuration file

And need to change some changes in entity class

@Cacheable

@Cache(usage=CacheConsurrencyStrategy.READONLY)

* By default query cache is disabled
* For HQL we have to create the object of query

Query q = session.createQuery(“”);

* SQL in hibernate called native query

Using SQLQuery we can use SQL in hibernate.

**GET vs LOAD**

**SAVE and Persist**