

## Hibernate

## JPA

### Both are orm

Annotation same.

hibernate.cfg.xml

persistence.xml

database details

drivername, url, username, password, mapping file and dialect class.

SessionFactory

EntityManagerFactory

Session

EntityManager

Transaction

EntityTransaction

save()

persist()

delete()

remove()

update()

merge()

find()

get()

## JPA project

If we want to retrieve more than one records in JPA we need to use JPQL like HQL.

select emp from Employee emp  
class name and emp is object.

HQL or JPQL Employee is entity

Product	Orders	one to many relationship
Employee	skillset	one to many relationship

Id	Name	salary	skillset
1	Steven	34000	Java, Python

### Employee table

PK

Id	Name	Salary
100	Steven	34000

create table employee(id int primary key,name varchar(20), salary float);

### Skillset table

PK

FK

Ssid	SName	esid
1	Java	100
2	Python	100

create table skillset(ssid int primary key auto\_increment,sname varchar(30), esid int, foreign key(esid) references employee(id));

Foreign key can allow null value.

In Database using PK and FK we connected employee and skillset table.

In Java side

Employee has skillset

Skillset has employee

Trainer

Students

Trainer can handle more than one student.

### Spring MVC with JPA

Create dynamic web project with version 2.5 and convert this project to maven project.

Spring mvc

Spring jdbc

Spring orm

Mysql connector

Jpa

Jstl

In spring MVC no persistence.xml file. All database details and mapping file details we write inside dispatcher-servlet.xml file.

In Dao layer we do DI for **EntityManagerFactory**.

### *LocalContainerEntityManagerFactoryBean*

Is one of the pre defined class part of spring orm module which help to integrate spring with jpa orm tool. This class help use to do DI for EntityManagerFactory inside Dao layer.