**WEEK-3**

**Difference between JPA, Hibernate and Spring Data JPA**

**JPA(Java Persistance API)**

JPA is the Java specification and not the implementation.

It defines how Java objects interact with relational databases.

Defines annotations like @Entity, @Id, @OneToMany, @Table

Ex:

@Entity

public class Employee {

@Id

private int id;

private String name;

}

**Hibernate**

Hibernate is an implementation of JPA and uses common standards of Java Persistence API.

Comes with its own API like Session, Transaction, Query.

Ex:

Session session = sessionFactory.openSession();

Transaction tx = session.beginTransaction();

Employee emp = new Employee("Tejaswini");

session.save(emp);

tx.commit();

session.close();

**Spring Data JPA**

Spring Data JPA simplifies data access and persistence in Java applications, particularly within the Spring ecosystem.

Provides repository interfaces (JpaRepository, CrudRepository)

Ex:

import org.springframework.data.jpa.repository.JpaRepository;

public interface StudentRepository extends JpaRepository<Student, Long> {

// Custom methods can be added here if needed

}