What Can Spring Data JPA Do?

```java
@Repository
public class ManufacturerRepository {
    @PersistenceContext
    private EntityManager entityManager;

    public Manufacturer create(Manufacturer man) {
        entityManager.persist(man);
        entityManager.flush();
        return man;
    }

    public Manufacturer update(Manufacturer man) {
        man = entityManager.merge(man);
        entityManager.flush();
        return man;
    }

    public void delete(Manufacturer man) {
        entityManager.remove(man);
        entityManager.flush();
    }

    public Manufacturer find(Long id) {
        return entityManager.find(Manufacturer.class, id);
    }

    public List<Manufacturer> getManufacturersFoundedBeforeDate(Date date) {
        @SuppressWarnings("unchecked")
        List<Manufacturer> mans = entityManager
        .createQuery("select m from Manufacturer m where m.foundedDate < :date")
            .setParameter("date", date).getResultList();
        return mans;
    }

    public Manufacturer getManufacturerByName(String name) {
        Manufacturer man = (Manufacturer)entityManager
            .createQuery("select m from Manufacturer m where m.name like :name")
            .setParameter("name", name + "%").getSingleResult();
        return man;
    }

    public List<Manufacturer> getManufacturersThatSellModelsOfType(String mt) {
        @SuppressWarnings("unchecked")
        List<Manufacturer> mans = entityManager
            .createNamedQuery("Manufacturer.getAllThatSellAcoustics")
            .setParameter(1, mt).getResultList();
        return mans;
    }
}
```

What Can Spring Data JPA Do?

```
public interface ManufacturerJpaRepository
       extends JpaRepository<Manufacturer, Long> {

    List<Manufacturer> findByFoundedDateBefore(Date date);
    Manufacturer findByNameStartingWith(String name);
    List<Manufacturer> findByTypes(String typeName);

}
```

What Is Spring Data JPA?

Enhances standard JPA with Spring

Simplifies your Data Access Layer

Repository generator

Query DSL

Auditing paging

Gets out of the way if needed

Tip: Choosing a Java Data Access Layer

JDBC
Spring JDBC

☺

Simple DB's
Native SQL Needs
Reports

JEE 7 Batch
Spring Batch
Hadoop

☺

High Number
of SQL Writes

ORM
JPA/Hibernate
Spring Data JPA

☺

Data Graphs
Without Excessive
Relationships

NoSQL
MongoDB
Spring Data Mongo

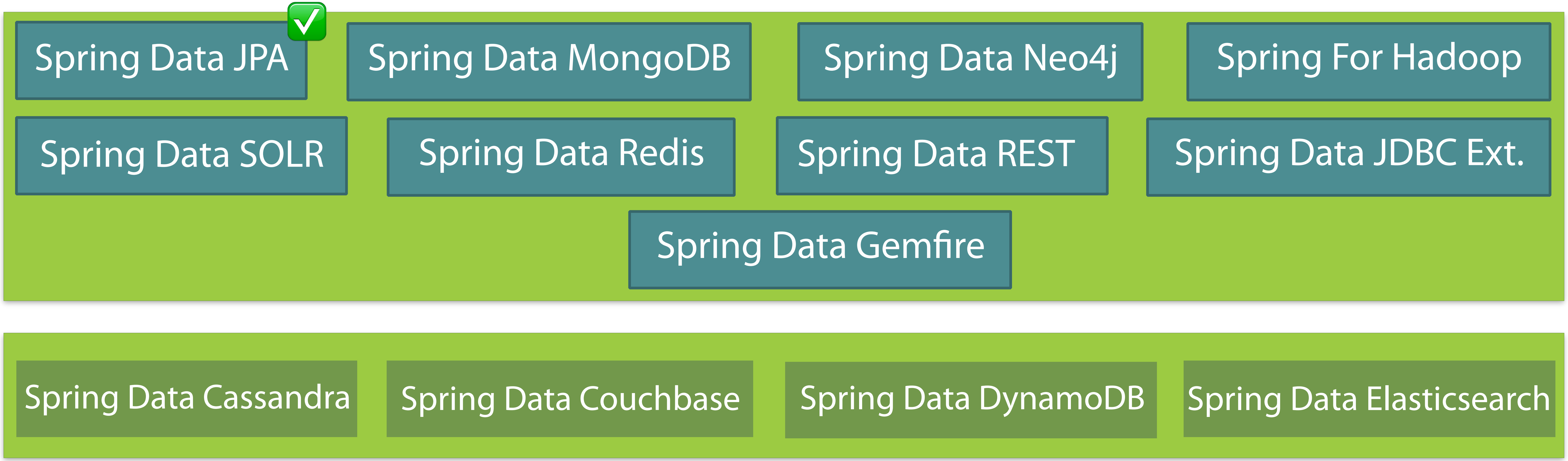
☺

Topic or Thread
Relational Data

Spring Data

Spring Data Commons

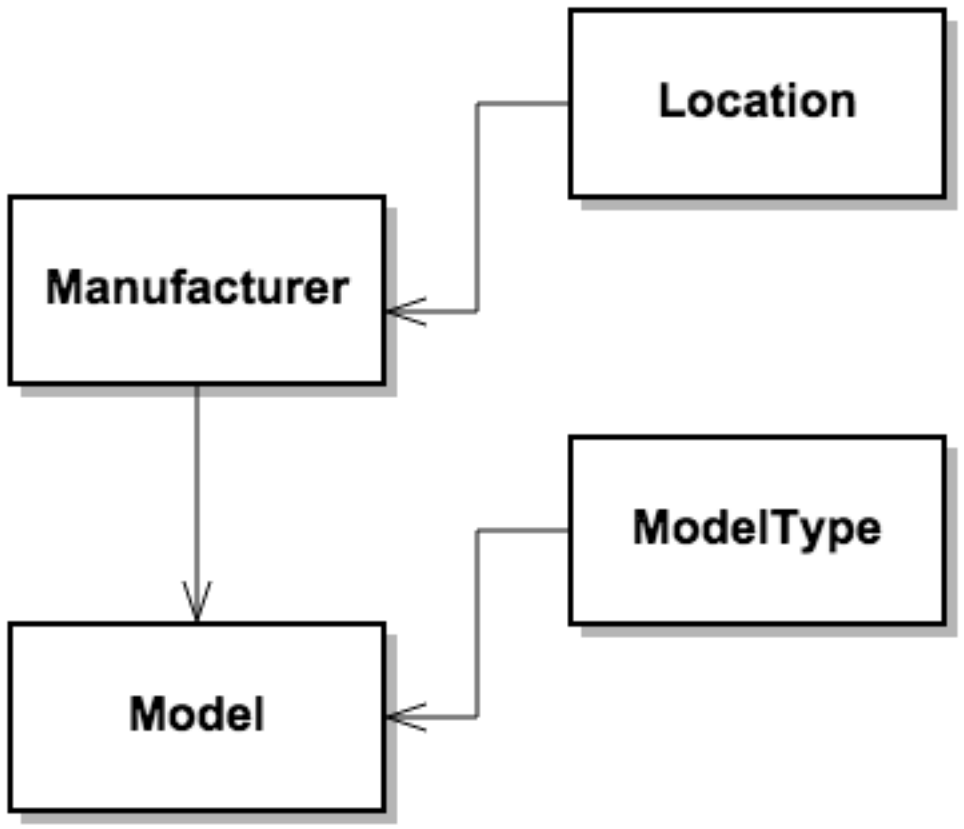
- Repository
- Cross-Store persistence
- Dynamic query generation

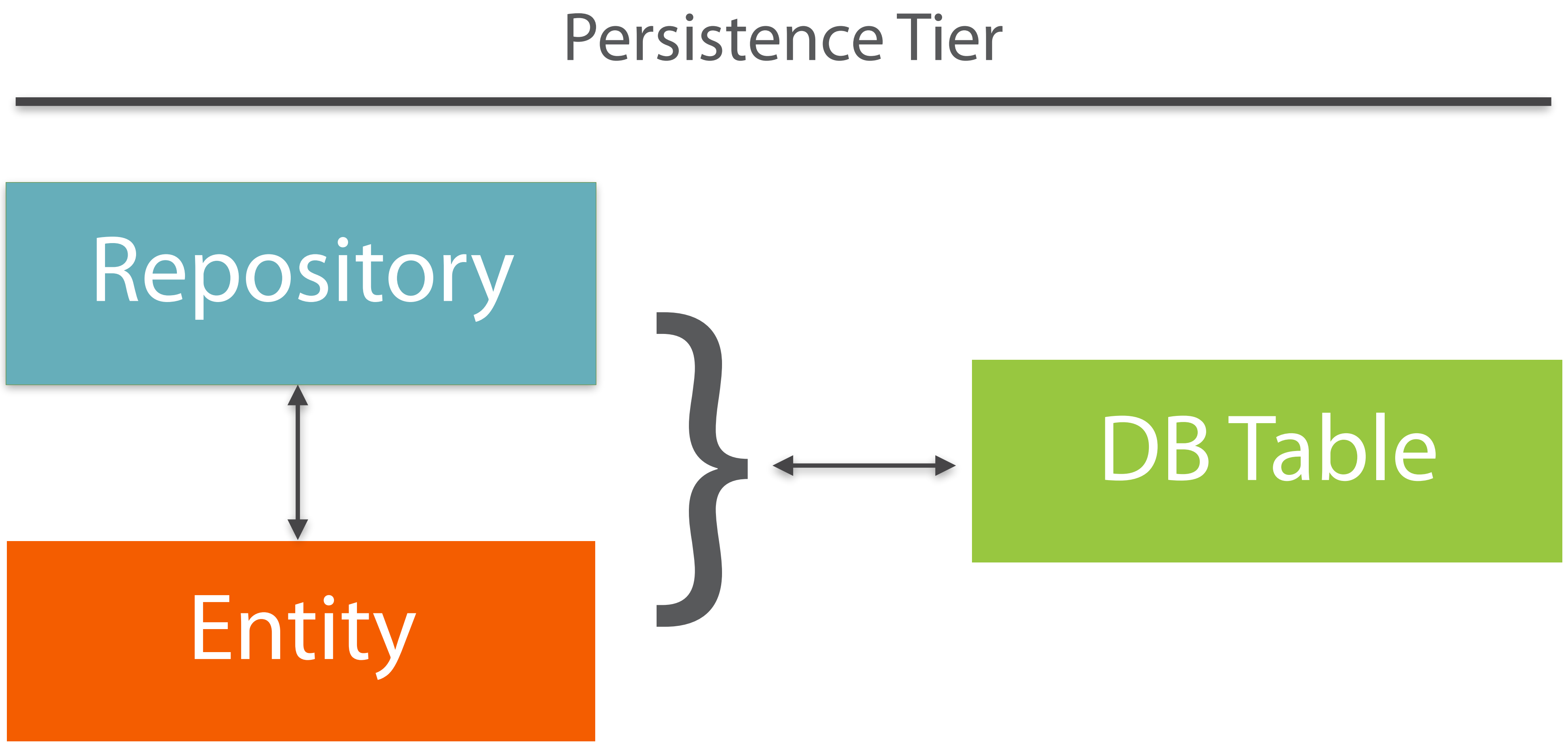


Spring Data JPA ✓
Spring Data MongoDB
Spring Data Neo4j
Spring For Hadoop
Spring Data SOLR
Spring Data Redis
Spring Data REST
Spring Data JDBC Ext.
Spring Data Gemfire

Spring Data Cassandra
Spring Data Couchbase
Spring Data DynamoDB
Spring Data Elasticsearch

Project Overview





Installing Spring Data JPA

```
<dependency>
    <groupId>org.springframework.data</groupId>
    <artifactId>spring-data-jpa</artifactId>
    <version>1.7.1.RELEASE</version>
</dependency>
```

```
<jpa:repositories base-package="com.guitar.db.repository"/>
```

```
@EnableJpaRepositories
```

Summary

Project setup

Installed Spring Data JPA

Where Spring Data JPA fits architecturally

Simplifies your data access layer