

```

public interface EmployeeDao {
    void addEmployee(Employee e);
}

public class EmployeeDaoJdbcImpl implements EmployeeDao {
    public void addEmployee(Employee e) {...}
}

public class EmployeeDaoMongoImpl implements EmployeeDao {
    public void addEmployee(Employee e) {...}
}

```

```

public class AppService {
    EmployeeDao empDao; // loosely coupled

    public void setEmpDao(EmployeeDao edao) {
        this.empDao = edao;
    }

    public void insert(Employee e) {
        this.empDao.addEmployee(e);
    }
}

```

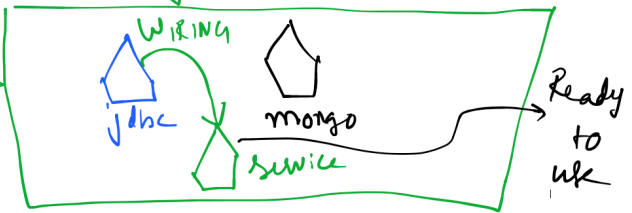
```

<beans>
  <bean id="jdbc" class="pkg.EmployeeDaoJdbcImpl" />
  <bean id="mongo" class="pkg.EmployeeDaoMongoImpl" />
  <bean id="service" class="pkg.AppService">
    <property name="empDao" ref="jdbc" />
  </bean>
</beans>

```

METADATA

```
ApplicationContext ctx = new ClassPathXmlApplicationContext("beans.xml");
```



```

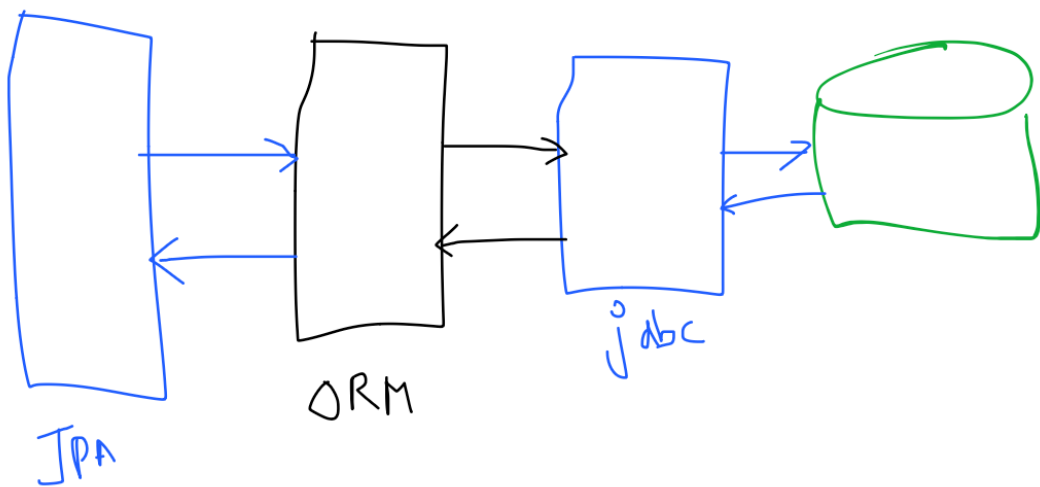
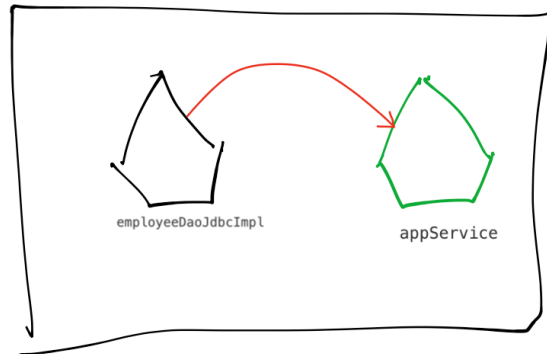
public interface EmployeeDao {
    void addEmployee(Employee e);
}

@Repository
public class EmployeeDaoJdbcImpl implements EmployeeDao {
    public void addEmployee(Employee e) {...}
}

@Service
public class AppService {
    @Autowired
    EmployeeDao empDao; // loosely coupled

    public void insert(Employee e) {
        this.empDao.addEmployee(e);
    }
}

```



```

@Override
public void addProduct(Product product) throws DaoException {
    Connection con = null;
    try {
        String SQL = "INSERT INTO products (id, name, price, quantity) VALUES(?, ?, ?, ?)";
        con = DBUtil.getConnection();
        PreparedStatement ps = con.prepareStatement(SQL);
        ps.setString(1, product.getName());
        ps.setDouble(2, product.getPrice());
        ps.setInt(3, product.getQuantity());
        ps.executeUpdate();
    } catch (SQLException ex) {
        if(ex.getErrorCode() == 1062) {
            throw new DaoException("Product with given id: " + product.getId() + " already exists!");
        } else if(ex.getErrorCode() == 1054) {
            throw new DaoException("Unable to add Product!!", ex);
        }
    } finally {
        DBUtil.closeConnection(con);
    }
}

```

```

public void addProduct(Product product) {
    em.persist(product);
}

```

