# Spring

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# Contents

# Introduction

# Spring Modules

- Core
- Beans
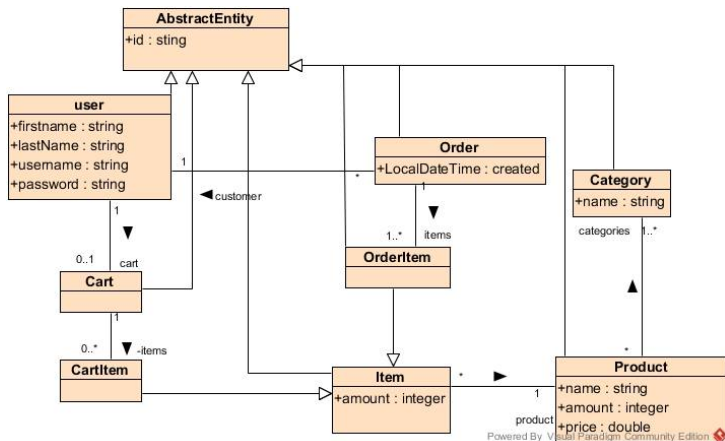- Context
- Transactions
- Aspects
- ORM

# Spring Annotations

- defining spring component
  (@Component/@Configuration/@Repository/@Service)
- producing/injecting spring beans (@Bean/@Autowired)
- searching for spring beans (@ComponentScan)
- composing spring configuration (@Import)
- transactions support
  (@EnableTransactionManagement,@Transactional)

# Demo E-Shop Application

# JPA Model

# Task

# Task 1 – Configuration of Persistance Layer (1 point)

1. Clone project
   https://gitlab.fel.cvut.cz/ear/b181-eshop
2. Checkout branch *b181-seminar-04-task*
3. Configure persistance layer by following steps
   - add necessary maven dependencies (this should make project compilable)
   - inject dependant classes into persistence configuration class
   - make sure that EntityManagerFactory bean is produced from persistence configuration class
   - configure what packages related to persistence should be scanned for spring annotations
   - add appropriate annotations for persistence layer classes
4. **Hint:** Use tests to help you debug configuration issues.
5. **Acceptance criteria:** All enabled test are passing.

# Task 2 – Implementation of a Service (1 point)

1. remove `@Ignore` annotation from `CartServiceTest` and verify that tests are now failing
2. Configure service layer by following steps
   - make separate java class for configuration of service layer
   - add it to configuration of the application
   - configure what packages related to service layer should be scanned for spring annotations
   - enable transactional transactional management
3. Implement `CartService` that allows to
   - add specific items to a cart
   - remove specific items from a cart
   - amount of products available in stock should be correctly adjusted during each add/remove operation
4. make sure that service methods are transactional
5. **Acceptance criteria:** Transactional processing is configured properly and all tests are passing.

# The End

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# Thank You