商场促销系统

系统设计文档（Proposed version）

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# 介绍

## 目的

这篇文档是商场促销系统的建模设计文档，意在介绍通过使用UML工具对整个系统进行建模的过程，即来源于需求分析文档又衔接编码人员的一个建模过程，编码人员可以通过此文档清晰地编写实现本系统。

## 范围

本文档从需求分析文档开始，对需求分析中的用例图进行分类装包，对其中的参与者进行实体的识别，对其中的用例进行类的建立。

## 定义，缩写词

促销系统：商场促销系统

## 参考文献

百度百科：类图

DAO：Data Access Object

## 内容概览

### 身份验证模块

为满足系统身份验证的功能需要，身份验证模块需要完成用户名、口令的输入，与数据库记录进行匹配后，返回用户身份信息并交与控制层。

### 结算模块

作为收银中的重要模块，结算模块包含以下几个模块：订单创建、促销匹配、支付。

### 促销规则匹配模块

促销规则匹配需要完成促销规则的匹配，匹配过程中需要多次过滤促销规则、匹配和有效性以及冲突检查。

### 支付模块

支付模块是促销系统中结算步骤的最后一步，需要面向接口进行设计，需要实现多种支付方式的支持。

### 分级管理模块

次模块主要面向管理员，管理员应当适当拥有收银员的功能，又根据管理需要可以自定义管理功能。

### DAO

作为数据访问对象，DAO负责数据库的连接，数据库实体与实现实体的映射。

### Controller

促销系统是一个Web类型的项目，为了解耦，方便后续维护进行了MVC的分层设计，Controller在此扮演控制层角色。

### 外部系统支持

促销系统不负责顾客信息维护、雇员信息维护、商品信息维护、第三方的支付系统，但系统需要这些信息作为本系统功能实现的基础，因此需要提供外部的系统支持，包含但不仅限于：顾客信息支持系统、雇员信息支持系统、商品信息支持系统、第三方支付系统。

### 外部依赖项

项目的实现需要才用已有的成熟框架和数据库系统，这些系统需要引入外部的包，这些属于促销系统的外部依赖项。

# 系统设计表示方法

## 类图

类图(Class diagram)由许多（静态）说明性的模型元素（例如类、包和它们之间的关系，这些元素和它们的内容互相连接）组成。类图可以组织在（并且属于）包中，仅显示特定包中的相关内容。类图(Class diagram)是最常用的UML图，显示出类、接口以及它们之间的静态结构和关系；它用于描述系统的结构化设计。类图(Class diagram)最基本的元素是类或者接口。

## 包图

包图是在 UML 中用类似于文件夹的符号表示的模型元素的组合。系统中的每个元素都只能为一个包所有，一个包可嵌套在另一个包中。使用包图可以将相关元素归入一个系统。一个包中可包含附属包、图表或单个元素。

# 促销系统结构概要设计模型

## Class Model diagram

Class diagram in package 'Class Model'

Class Model

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1. Class Mode

## System

Package in package 'Class Model'

System

Version 1.0 Phase 1.0 Proposed

created on 2017/5/10. Last modified 2017/5/10

# 促销系统详细设计模型

## System diagram

Class diagram in package 'System'

System

Version 1.0

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1. System

## controller

Package in package 'System'

controller

Version 1.0 Phase 1.0 Proposed

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## dao

Package in package 'System'

dao

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

## beans

Package in package 'System'

beans

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'beans' Package to 'dao' Package | Direction: Source -> Destination |
| PackageImport from 'controller' Package to 'beans' Package | Direction: Source -> Destination |

### beans diagram

Class diagram in package 'beans'

beans

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1. beans

### checkout

Package in package 'beans'

checkout

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| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'persons' Package to 'checkout' Package | Direction: Source -> Destination |

##### checkout diagram

Class diagram in package 'checkout'

checkout

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1. checkout

##### DiscountRuleImpl

Class in package 'checkoutImpl'

DiscountRuleImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from DiscountRuleImpl to DiscountRule  [ Direction is 'Source -> Destination'. ] |

##### OrderImpl

Class in package 'checkoutImpl'

OrderImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from OrderImpl to Order  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| calculateAmount () : double Public  Properties:  Implements = Order.calculateAmount  ImplementsGuid = {5C96C30A-06CC-4dc9-81DB-4595EBD5BA20}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### checkoutImpl

Package in package 'checkout'

checkoutImpl

Version 1.0 Phase 1.0 Proposed

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###### DiscountRuleImpl

Class in package 'checkoutImpl'

DiscountRuleImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from DiscountRuleImpl to DiscountRule  [ Direction is 'Source -> Destination'. ] |

###### OrderImpl

Class in package 'checkoutImpl'

OrderImpl

Version 1.0 Phase 1.0 Proposed

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| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from OrderImpl to Order  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| calculateAmount () : double Public  Properties:  Implements = Order.calculateAmount  ImplementsGuid = {5C96C30A-06CC-4dc9-81DB-4595EBD5BA20}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### DiscountRuleMatcherImpl

Class in package 'checkout'

DiscountRuleMatcherImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from DiscountRuleMatcherImpl to DiscountMatcher  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doDiscountRuleMatch (goods : Set<Good> ) : ArrayList<Map<DiscountRule,Good>> avaliableMatch Public  Properties:  Implements = DiscountMatcher.doDiscountRuleMatch  ImplementsGuid = {A777974C-3722-412a-9A98-A26A98264025}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doMutexCheck () : ArrayList<Map<DiscountRule,Good>> Private  Properties:  Implements = DiscountMatcher.doMutexCheck  ImplementsGuid = {1A05583D-D45B-4ffa-951B-11C645D2D867}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doPresentCheck () : int Private  Properties:  Implements = DiscountMatcher.doPresentCheck  ImplementsGuid = {2426182F-305E-45f1-9D4D-04667F047B7B}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doPresentDecision () : Set<Present> Private  Properties:  Implements = DiscountMatcher.doPresentDecision  ImplementsGuid = {B848F130-95FD-41ea-A457-7BFF253A96C2}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doRuleMatch (customer : Customer , rules : ArrayList<DiscountRule> ) : ArrayList<Map<DiscountRule,Good>> Private  Properties:  Implements = DiscountMatcher.doRuleMatch  ImplementsGuid = {EC867030-2DCD-422d-89E1-E949777184EE}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doValidity () : ArrayList<Map<DiscountRule,Good>> Private  Properties:  Implements = DiscountMatcher.doValidity  ImplementsGuid = {7F32224E-D5A0-495f-839C-9AB03F45FB90}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| filteCustomer (customer : Customer ) : ArrayList<DiscountRule> Private  Properties:  Implements = DiscountMatcher.filteCustomer  ImplementsGuid = {82C1A2FE-37FA-4ad1-9938-D58EBD48A7A7}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### DiscountMatcher

Interface in package 'checkout'

DiscountMatcher

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from DiscountRuleMatcherImpl to DiscountMatcher  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| customer : Customer Private  [ Is static False. Containment is Not Specified. ] |
| goods : Set<Good,Integer> Private  [ Is static False. Containment is Not Specified. ] |
| goodSupport : Good Private  [ Is static False. Containment is Not Specified. ] |
| matchingRules : ArrayList<Map<DiscountRule,Good>> Private  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) | |
| Source: Public (Interface) DiscountMatcher | Target: Private relatedDiscountRule (Interface) DiscountRule |
| Association (direction: Unspecified) | |
| Source: Public (Interface) Order | Target: Public discountMatcher (Interface) DiscountMatcher |

| OPERATIONS |
| --- |
| doDiscountRuleMatch (goods : Set<Good> ) : ArrayList<Map<DiscountRule,Good>> avaliableMatch Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doMutexCheck () : ArrayList<Map<DiscountRule,Good>> Private  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doPresentCheck () : int Private  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doPresentDecision () : Set<Present> Private  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doRuleMatch (customer : Customer , rules : ArrayList<DiscountRule> ) : ArrayList<Map<DiscountRule,Good>> Private  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doValidity () : ArrayList<Map<DiscountRule,Good>> Private  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| filteCustomer (customer : Customer ) : ArrayList<DiscountRule> Private  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### DiscountRule

Interface in package 'checkout'

DiscountRule

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from DiscountRuleImpl to DiscountRule  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| bundleGoods : Set<ArrayList<Good>> Private = null  [ Is static False. Containment is Not Specified. ] |
| datePeriodEnd : Date Private = null  [ Is static False. Containment is Not Specified. ] |
| datePeriodStart : Date Private = null  [ Is static False. Containment is Not Specified. ] |
| dayPeriodEnd : int Private = 1440  [ Is static False. Containment is Not Specified. ] |
| dayPeriodStart : int Private = 0  start at 00:00 counted by minutes  [ Is static False. Containment is Not Specified. ] |
| priority : int Private = 0  [ Is static False. Containment is Not Specified. ] |
| singleGoods : int Private = null  [ Is static False. Containment is Not Specified. ] |
| weekPeriodEnd : int Private = 7  [ Is static False. Containment is Not Specified. ] |
| weekPeriodStart : int Private = 1  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) | |
| Source: Public (Interface) DiscountMatcher | Target: Private relatedDiscountRule (Interface) DiscountRule |

##### GoodsImport

Interface in package 'checkout'

GoodsImport

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| ATTRIBUTES |
| --- |
| importedGoods : Map<Good,Integer> Private  [ Is static False. Containment is Not Specified. ] |

| OPERATIONS |
| --- |
| getAllGoods () : Map<Good,Integer> Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| importGood (good : Good ) : boolean Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| importGoods () : boolean Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| removeGood (good : Good ) : Good Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### Order

Interface in package 'checkout'

Order

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from OrderImpl to Order  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| avaliableMatcher : ArrayList<Map<DiscountRule,Good>> Private  [ Is static False. Containment is Not Specified. ] |
| discountMatcher : DiscountMatcher Public  [ Is static False. Containment is Not Specified. ] |
| finalGoodsList : Set<Set<Good,Integer>,Double> Private  [ Is static False. Containment is Not Specified. ] |
| oderBuildDate : Date Private  [ Is static False. Containment is Not Specified. ] |
| orderID : String Private  [ Is static False. Containment is Not Specified. ] |
| relatedCustomer : Customer Private  [ Is static False. Containment is Not Specified. ] |
| relatedDiscountRule : DiscountRule Private  [ Is static False. Containment is Not Specified. ] |
| relatedPayment : Payment Private  [ Is static False. Containment is Not Specified. ] |
| sum : double Private  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) | |
| Source: Public (Interface) Order | Target: Public discountMatcher (Interface) DiscountMatcher |

| OPERATIONS |
| --- |
| calculateAmount () : double Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### Present

Interface in package 'checkout'

Present

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from Present to PresentType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| presentContent : String Private  [ Is static False. Containment is Not Specified. ] |
| presentID : String Private  [ Is static False. Containment is Not Specified. ] |
| presentType : PresentType Private  [ Is static False. Containment is Not Specified. ] |

##### PresentType

Enumeration in package 'checkout'

PresentType

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from Present to PresentType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| voucher : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| good : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cash : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

### outsideSupportSys

Package in package 'beans'

outsideSupportSys

Version 1.0 Phase 1.0 Proposed

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| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'persons' Package to 'outsideSupportSys' Package | Direction: Source -> Destination |

##### outsideSupportSys diagram

Class diagram in package 'outsideSupportSys'

outsideSupportSys

Version 1.0

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1. outsideSupportSys

##### CustomerSupportSysImpl

Class in package 'outsideSupportImpl'

CustomerSupportSysImpl

Version 1.0 Phase 1.0 Proposed

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| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CustomerSupportSysImpl to Customer  [ Direction is 'Source -> Destination'. ] |

##### EmployeeSupportSysImpl

Class in package 'outsideSupportImpl'

EmployeeSupportSysImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from EmployeeSupportSysImpl to Employee  [ Direction is 'Source -> Destination'. ] |

##### GoodsSupportSysImpl

Class in package 'outsideSupportImpl'

GoodsSupportSysImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from GoodsSupportSysImpl to Good  [ Direction is 'Source -> Destination'. ] |

##### outsideSupportImpl

Package in package 'outsideSupportSys'

outsideSupportImpl

Version 1.0 Phase 1.0 Proposed

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###### CustomerSupportSysImpl

Class in package 'outsideSupportImpl'

CustomerSupportSysImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CustomerSupportSysImpl to Customer  [ Direction is 'Source -> Destination'. ] |

###### EmployeeSupportSysImpl

Class in package 'outsideSupportImpl'

EmployeeSupportSysImpl

Version 1.0 Phase 1.0 Proposed

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| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from EmployeeSupportSysImpl to Employee  [ Direction is 'Source -> Destination'. ] |

###### GoodTypeImpl

Class in package 'outsideSupportImpl'

GoodTypeImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from GoodTypeImpl to GoodTypeEnum  [ Direction is 'Source -> Destination'. ] |
| Realization from GoodTypeImpl to GoodType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| type : enum Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

###### GoodsSupportSysImpl

Class in package 'outsideSupportImpl'

GoodsSupportSysImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from GoodsSupportSysImpl to Good  [ Direction is 'Source -> Destination'. ] |

###### GoodTypeEnum

Enumeration in package 'outsideSupportImpl'

GoodTypeEnum

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from GoodTypeImpl to GoodTypeEnum  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| dailyLife : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| ectronics : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| food : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| office : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| software : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cooking : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

##### Customer

Interface in package 'outsideSupportSys'

Customer

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CustomerSupportSysImpl to Customer  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| cusCredit : double Private  [ Is static False. Containment is Not Specified. ] |
| cusID : String Private  [ Is static False. Containment is Not Specified. ] |
| cusName : String Private  [ Is static False. Containment is Not Specified. ] |

| OPERATIONS |
| --- |
| sendPresent (presents : Set<Present> ) : int Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### Employee

Interface in package 'outsideSupportSys'

Employee

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from EmployeeSupportSysImpl to Employee  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| emID : String Private  [ Is static False. Containment is Not Specified. ] |
| emName : String Private  [ Is static False. Containment is Not Specified. ] |
| emPass : String Private  [ Is static False. Containment is Not Specified. ] |

##### Good

Interface in package 'outsideSupportSys'

Good

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from GoodsSupportSysImpl to Good  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| goodID : String Private  [ Is static False. Containment is Not Specified. ] |
| goodName : String Private  [ Is static False. Containment is Not Specified. ] |
| goodPrice : double Private  [ Is static False. Containment is Not Specified. ] |
| goodType : String Private  [ Is static False. Containment is Not Specified. ] |

##### GoodType

Interface in package 'outsideSupportSys'

GoodType

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from GoodTypeImpl to GoodType  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| type : enum Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

### payment

Package in package 'beans'

payment

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'persons' Package to 'payment' Package | Direction: Source -> Destination |

##### payment diagram

Class diagram in package 'payment'

payment

Version 1.0

邱依强 created on 2017/5/13. Last modified 2017/5/14



1. payment

##### paymentImpl

Package in package 'payment'

paymentImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

##### AlipayPaymentImpl

Class in package 'payment'

AlipayPaymentImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from AlipayPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doPayment () : boolean Public  Properties:  Implements = Payment.doPayment  ImplementsGuid = {B95F7A79-F1B7-4bcf-9290-488C71AB95D5}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### CardPaymentImpl

Class in package 'payment'

CardPaymentImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CardPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doPayment () : boolean Public  Properties:  Implements = Payment.doPayment  ImplementsGuid = {B95F7A79-F1B7-4bcf-9290-488C71AB95D5}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### CashPaymentImpl

Class in package 'payment'

CashPaymentImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CashPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doPayment () : boolean Public  Properties:  Implements = Payment.doPayment  ImplementsGuid = {B95F7A79-F1B7-4bcf-9290-488C71AB95D5}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### CreditPaymentImpl

Class in package 'payment'

CreditPaymentImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CreditPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doPayment () : boolean Public  Properties:  Implements = Payment.doPayment  ImplementsGuid = {B95F7A79-F1B7-4bcf-9290-488C71AB95D5}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### WechatPaymentImpl

Class in package 'payment'

WechatPaymentImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from WechatPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doPayment () : boolean Public  Properties:  Implements = Payment.doPayment  ImplementsGuid = {B95F7A79-F1B7-4bcf-9290-488C71AB95D5}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### Payment

Interface in package 'payment'

Payment

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CreditPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |
| Realization from WechatPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |
| Realization from CardPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |
| Realization from CashPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |
| Realization from AlipayPaymentImpl to Payment  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| paymentChannel : PaymentChannel Private  [ Is static False. Containment is Not Specified. ] |
| paymentChennelSideID : int Private  [ Is static False. Containment is Not Specified. ] |
| paymentID : String Private  [ Is static False. Containment is Not Specified. ] |
| paymentSum : double Private  [ Is static False. Containment is Not Specified. ] |
| relatedOrders : Set<Order> Private  [ Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) | |
| Source: Public (Interface) Payment | Target: Private paymentChannel (Enumeration) PaymentChannel |

| OPERATIONS |
| --- |
| doPayment () : boolean Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### PaymentChannel

Enumeration in package 'payment'

PaymentChannel

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| ATTRIBUTES |
| --- |
| alipay : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| wechat : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| card : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| credit : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cash : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

| ASSOCIATIONS | |
| --- | --- |
| Association (direction: Unspecified) | |
| Source: Public (Interface) Payment | Target: Private paymentChannel (Enumeration) PaymentChannel |

### persons

Package in package 'beans'

persons

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'persons' Package to 'outsideSupportSys' Package | Direction: Source -> Destination |
| PackageImport from 'persons' Package to 'security' Package | Direction: Source -> Destination |
| PackageImport from 'persons' Package to 'payment' Package | Direction: Source -> Destination |
| PackageImport from 'persons' Package to 'checkout' Package | Direction: Source -> Destination |

##### persons diagram

Class diagram in package 'persons'

persons

Version 1.0

邱依强 created on 2017/5/13. Last modified 2017/5/14



1. persons

##### AdminRoleManagerImpl

Class in package 'personsImpl'

AdminRoleManagerImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from AdminRoleManagerImpl to Administrator  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to CashSideEmployeeAdmin  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to DiscountAdmin  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to CashierAdmin  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to SystemAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### CashierAdmin

Class in package 'personsImpl'

CashierAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

Extends CashierImpl

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from CashierAdmin to CashierImpl  [ Direction is 'Source -> Destination'. ] |
| Realization from CashierAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to CashierAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### CashierImpl

Class in package 'personsImpl'

CashierImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CashierImpl to Cashier  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from CashierAdmin to CashierImpl  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| createOrder () : Public  Properties:  Implements = Cashier.createOrder  ImplementsGuid = {D6CE29D6-7258-4f2c-9674-38CF121CB105}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### CashSideEmployeeAdmin

Class in package 'personsImpl'

CashSideEmployeeAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CashSideEmployeeAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to CashSideEmployeeAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### DiscountAdmin

Class in package 'personsImpl'

DiscountAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from DiscountAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to DiscountAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### SelfCheckOutAdapterImpl

Class in package 'personsImpl'

SelfCheckOutAdapterImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from SelfCheckOutAdapterImpl to SelfCheckOutAdapter  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| createOrder () : Public  Properties:  Implements = Cashier.createOrder  ImplementsGuid = {D6CE29D6-7258-4f2c-9674-38CF121CB105}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### SystemAdmin

Class in package 'personsImpl'

SystemAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from SystemAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to SystemAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### personsImpl

Package in package 'persons'

personsImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

###### AdminRoleManagerImpl

Class in package 'personsImpl'

AdminRoleManagerImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from AdminRoleManagerImpl to Administrator  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to CashSideEmployeeAdmin  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to DiscountAdmin  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to CashierAdmin  [ Direction is 'Source -> Destination'. ] |
| Aggregation from AdminRoleManagerImpl to SystemAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

###### CashSideEmployeeAdmin

Class in package 'personsImpl'

CashSideEmployeeAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CashSideEmployeeAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to CashSideEmployeeAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

###### CashierAdmin

Class in package 'personsImpl'

CashierAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

Extends CashierImpl

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from CashierAdmin to CashierImpl  [ Direction is 'Source -> Destination'. ] |
| Realization from CashierAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to CashierAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

###### CashierImpl

Class in package 'personsImpl'

CashierImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CashierImpl to Cashier  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from CashierAdmin to CashierImpl  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| createOrder () : Public  Properties:  Implements = Cashier.createOrder  ImplementsGuid = {D6CE29D6-7258-4f2c-9674-38CF121CB105}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

###### DiscountAdmin

Class in package 'personsImpl'

DiscountAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from DiscountAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to DiscountAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

###### SelfCheckOutAdapterImpl

Class in package 'personsImpl'

SelfCheckOutAdapterImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from SelfCheckOutAdapterImpl to SelfCheckOutAdapter  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| createOrder () : Public  Properties:  Implements = Cashier.createOrder  ImplementsGuid = {D6CE29D6-7258-4f2c-9674-38CF121CB105}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

###### SystemAdmin

Class in package 'personsImpl'

SystemAdmin

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from SystemAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Aggregation from AdminRoleManagerImpl to SystemAdmin  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  Properties:  Implements = Administrator.doAdmin  ImplementsGuid = {BC66521D-95BC-441e-A8BE-43F3C0D16967}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### Administrator

Interface in package 'persons'

Administrator

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

Extends CashSideEmployee

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from Administrator to CashSideEmployee  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from SystemAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |
| Realization from AdminRoleManagerImpl to Administrator  [ Direction is 'Source -> Destination'. ] |
| Realization from CashSideEmployeeAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |
| Realization from DiscountAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |
| Realization from CashierAdmin to Administrator  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String , role : AdminStatus ) : AdminStatus Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### CashSideEmployee

Interface in package 'persons'

CashSideEmployee

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from Administrator to CashSideEmployee  [ Direction is 'Source -> Destination'. ] |
| Generalization from Cashier to CashSideEmployee  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| emIdentity : EmIdentity Private = NULL  Alias: 员工身份  [ Is static False. Containment is Not Specified. ] |
| employee : Employee Private  [ Is static False. Containment is Not Specified. ] |

##### Cashier

Interface in package 'persons'

Cashier

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

Extends CashSideEmployee

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from Cashier to CashSideEmployee  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from CashierImpl to Cashier  [ Direction is 'Source -> Destination'. ] |
| Generalization from SelfCheckOutAdapter to Cashier  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| createOrder () : Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### SelfCheckOutAdapter

Interface in package 'persons'

SelfCheckOutAdapter

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

Extends Cashier

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Generalization from SelfCheckOutAdapter to Cashier  [ Direction is 'Source -> Destination'. ] |

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from SelfCheckOutAdapterImpl to SelfCheckOutAdapter  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| customer : Customer Private  [ Is static False. Containment is Not Specified. ] |

##### AdminStatus

Enumeration in package 'persons'

AdminStatus

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| ATTRIBUTES |
| --- |
| systemAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cashierAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| discountRuleAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cashSideEmAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| privilegesInsufficient : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

### security

Package in package 'beans'

security

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'persons' Package to 'security' Package | Direction: Source -> Destination |

##### security diagram

Class diagram in package 'security'

security

Version 1.0

邱依强 created on 2017/5/13. Last modified 2017/5/14



1. security

##### IDVerifyImpl

Class in package 'securityImpl'

IDVerifyImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from IDVerifyImpl to IDVerify  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doVerify (userName : String , passWord : String ) : IDVerifyStatus Public  Alias: 进行验证  Properties:  Implements = IDVerify.doVerify  ImplementsGuid = {CA788DB7-F91A-4fd3-912E-C4342BF6C83C}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### securityImpl

Package in package 'security'

securityImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

###### IDVerifyImpl

Class in package 'securityImpl'

IDVerifyImpl

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OUTGOING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from IDVerifyImpl to IDVerify  [ Direction is 'Source -> Destination'. ] |

| OPERATIONS |
| --- |
| doVerify (userName : String , passWord : String ) : IDVerifyStatus Public  Alias: 进行验证    Properties:  Implements = IDVerify.doVerify  ImplementsGuid = {CA788DB7-F91A-4fd3-912E-C4342BF6C83C}  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### IDVerify

Interface in package 'security'

IDVerify

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

| INCOMING STRUCTURAL RELATIONSHIPS |
| --- |
| Realization from IDVerifyImpl to IDVerify  [ Direction is 'Source -> Destination'. ] |

| ATTRIBUTES |
| --- |
| dao : CashSideEmpoyeeDAO Private  [ Is static False. Containment is Not Specified. ] |
| employee : CashSideEmployee Private  [ Is static False. Containment is Not Specified. ] |
| status : IDVerifyStatus Private = invalid  [ Is static False. Containment is Not Specified. ] |

| OPERATIONS |
| --- |
| doVerify (userName : String , passWord : String ) : IDVerifyStatus Public  Alias: 进行验证  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

##### IDVerifyStatus

Enumeration in package 'security'

IDVerifyStatus

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

| ATTRIBUTES |
| --- |
| valid : int Public  Alias: 有效  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| inValid : int Public  Alias: 无效  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| doNOTExist : int Public  Alias: 不存在  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| locked : int Public  Alias: 已锁定  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cashier : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cashSideEmployeeAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| cashierAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| dicountRuleAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| systemAdmin : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |
| selfCheckOutAdapter : int Public  [ Stereotype is «enum». Is static False. Containment is Not Specified. ] |

## controller

Package in package 'System'

controller

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'controller' Package to 'beans' Package | Direction: Source -> Destination |

### controller diagram

Class diagram in package 'controller'

controller

Version 1.0

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1. controller

### AdminController

Class in package 'controller'

AdminController

Version 1.0 Phase 1.0 Proposed

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| ATTRIBUTES |
| --- |
| admin : Administrator Private  [ Is static False. Containment is Not Specified. ] |

| OPERATIONS |
| --- |
| doAdmin (operation : String ) : int Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

### CashierController

Class in package 'controller'

CashierController

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| ATTRIBUTES |
| --- |
| cashier : Cashier Private  [ Is static False. Containment is Not Specified. ] |

| OPERATIONS |
| --- |
| createOrder () : String Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| doPayment () : String Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| importCustomer () : String Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| importGoods (goods : Set<Good> ) : String Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| printTickets () : String Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| startCheckout () : String Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

### IDVerifyController

Class in package 'controller'

IDVerifyController

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| ATTRIBUTES |
| --- |
| idverify : IDVerify Private  [ Is static False. Containment is Not Specified. ] |

| OPERATIONS |
| --- |
| verifyID (employee : Employee ) : String Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

## dao

Package in package 'System'

dao

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/13. Last modified 2017/5/13

| LINKS TO OTHER PACKAGES | |
| --- | --- |
| PackageImport from 'beans' Package to 'dao' Package | Direction: Source -> Destination |

### dao diagram

Class diagram in package 'dao'

dao

Version 1.0

邱依强 created on 2017/5/14. Last modified 2017/5/14



1. dao

### daoImpl

Package in package 'dao'

daoImpl

Version 1.0 Phase 1.0 Proposed

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### CashSideEmpoyeeDAO

Interface in package 'dao'

CashSideEmpoyeeDAO

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/14

| OPERATIONS |
| --- |
| queryEmIdentity (emID : String ) : Set<IDVerifyStatus> Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

### DiscountRuleDAO

Interface in package 'dao'

DiscountRuleDAO

Version 1.0 Phase 1.0 Proposed

邱依强 created on 2017/5/14. Last modified 2017/5/15

| OPERATIONS |
| --- |
| queryRulesByDate (startDate : Date , endDate : Date ) : ArrayList<DiscountRule> Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |
| queryRulesByID (ID : String ) : DiscountRule Public  [ Is static False. Is abstract False. Is return array False. Is query False. Is synchronized False. ] |

# 外部依赖模型

## Frameworks

Package in package 'Class Model'

Frameworks

Version 1.0 Phase 1.0 Proposed

created on 2017/5/10. Last modified 2017/5/10

### Frameworks diagram

Class diagram in package 'Frameworks'

Frameworks

Version 1.0

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1. Frameworks