Object Oriented Analysis & Design
面向对象分析与设计

Lecture_05 领域模型

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5、其他的需求信息

- **除了用例之外的需求信息**
- Requirements
  - **Use Cases**
    - **Use Case model is more of analysis**
- Other Requirements
  - **Supplementary Specifications**
  - **Glossary**
  - **Vision**
  - **Business Rules**

Other Requirements: when

- **初启阶段** Inception
  - 部分的词汇表、数据字典、前景描述 Partial Glossary, Data Dictionary, Vision

- **精化阶段** Elaboration
  - 业务规则 Business Rules
  - 接近完整了(较少新的需求) All completed nearly

- **构建阶段** Construction
  - 微小的修改 Minor changed

Supplementary Specifications: FURPS+

- 功能性 Functionality
  - System functions, similar to use cases but not same
    - Functionalities common across some use cases
    - Processing CC payments is a function but may not be use case
    - Security, etc.
- 可使用性 Usability
  - User's perspective, what is important
- 可靠性 Reliability
  - Want to operate POS even when outside system fails
- 性能 Performance
  - As speed of transactione, etc.
- 可支持性 Supportability
  - Adaptability – different taxes, business rules, etc.
  - Configurability – hardware, networks, etc.

FURPS+

- **实现约束 Implementation constraints**
  - **Timing, technology, etc.**

- **购买还是开发 Purchase**
  - **What to purchase vs. develop, such as framework**

- **接口 Interface**
  - **Input/output devices and technology**
  - **GUI for the user**
  - **Interfaces to external systems**

- **法律问题 Legal, etc.**

前景 Vision

- **Short summary of major functions, constraints, etc.**
    - **Problem statement**
    - **Important stakeholders涉众 and their important interstes**
    - **Important actors and their important goals**
    - **Product overview**

Example for NextGen POS

- **Usability (Human Factors)**
  - **The customer will be able to see a large-monitor display of the POS. Therefore:**
    - Text should be easily visible from 1 meter.
    - Avoid colors associated with common forms of color blindness
- **Performance**
  - **authorization in less than1 minute, 90% of the time**
- **Implementation Constraints**
  - **NextGen leadership insists on a Java technologies solution, predicting this will improve long-term porting and supportability, in addition to ease of development**

Example for NextGen POS

- **Elements of the Supplementary Specification include:**
  - **FURPS+ requirements functionality, usability, reliability, performance, and supportability reports**
  - **hardware and software constraints (operating and networking systems, …)**
  - **development constraints (for example, process or development tools)**
  - **other design and implementation constraints**
  - **internationalization concerns (units, languages)**
  - **documentation (user, installation, administration) and help**
  - **licensing and other legal concerns**
  - **packaging**
  - **standards (technical, safety, quality)**
  - **physical environment concerns (for example, heat or vibration)**
  - **operational concerns (for example, how do errors get handled, or how often should backups be done?)**
  - **application-specific domain rules**
  - **information in domain**

Example for NextGen POS

- ## Vision

  - ### Introduction
    - We envision a next generation fault-tolerant point-of-sale (POS) application, NextGen POS, with the flexibility to support varying customer business rules, multiple terminal and user interface mechanisms, and integration with multiple third-party supporting systems

  - ### Business Opportunity
    - There is marketplace dissatisfaction with this inflexible state of affairs, and demand for a POS that rectifies this

  - ### Problem Statement
    - Traditional POS systems are inflexible, fault intolerant, and difficult to integrate with third-party systems

  - ...

- 本讲结束