# **UML Diagrams Examples**

# Examples by Technology or Application Domain

Ticket vending machine UML diagrams
Bank ATM UML diagrams
Hospital management UML diagrams
Digital imaging and communications in medicine (DICOM) UML diagrams
Java technology UML diagrams
Application development for Android UML diagrams
Software licensing and protection using SafeNet Sentinel HASP security solution

# Examples by Types of Diagrams

Class diagram examples
Communication diagram examples
Component diagram examples
Composite structure diagram examples
Deployment diagram examples
Information flow diagram example
Interaction overview diagram examples
Object diagram example
Package diagram examples
Profile diagram examples
Sequence diagram examples
State machine diagram examples
Timing diagram examples
Use case diagram examples

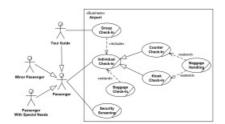
Online shopping UML diagrams

**Activity diagram examples** 

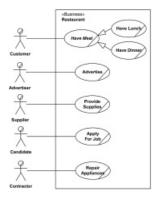
#### **Use Case Diagrams**

#### **Business Use Case Diagrams**

 $\uparrow$  Airport check-in and security screening business model





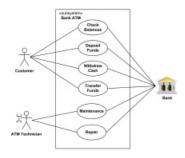


#### System Use Case Diagrams

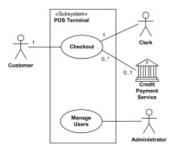
Ticket vending machine



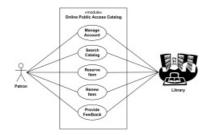
Bank ATM UML use case diagrams examples



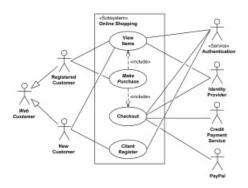
 $\frac{\circ}{h}$ — Point of Sales (POS) terminal



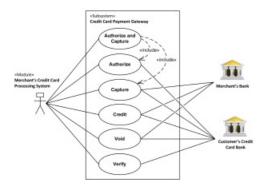
 $\stackrel{\mathtt{o}}{\nearrow}$ — e-Library online public access catalog (OPAC)



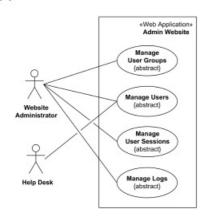
 $\stackrel{\circ}{\nearrow}$ —Online shopping use case diagrams



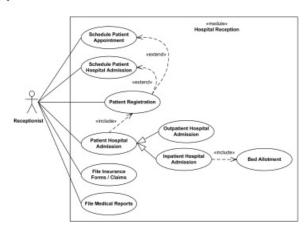
## $\stackrel{\diamond}{\nearrow}$ — Credit card processing system



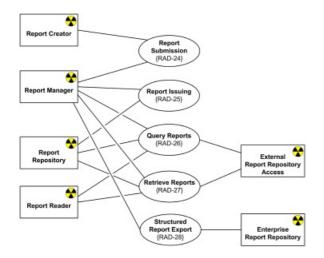
## **♦**— Website administration



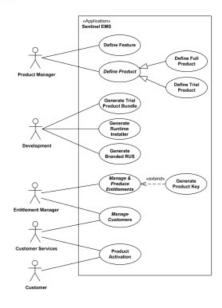
## Hospital Management



Radiology diagnostic reporting UML use case diagram example

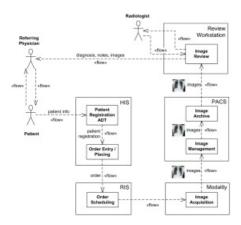


 $\stackrel{\diamond}{\nearrow}$ — Software protection and licensing UML use case diagram example



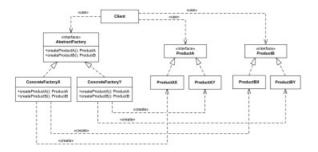
## **Information Flow Diagrams**

Scheduled Workflow information flow for the IHE Radiology Technical Framework



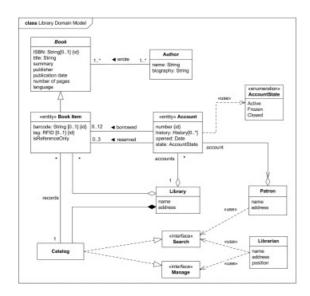
## **Class Diagrams**

**◯** Abstract Factory Design Pattern

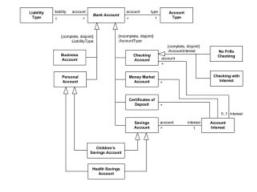


#### **Domain Models**

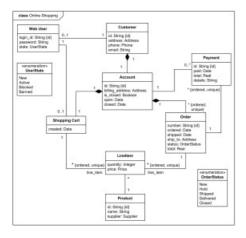
#### **□** ⇒ Library domain model



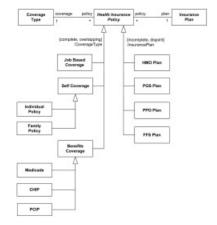
#### ■ Bank account class diagram example



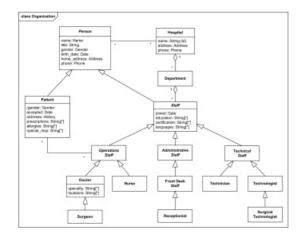
#### Online shopping domain model



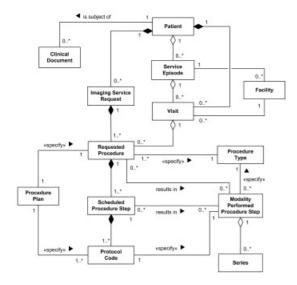




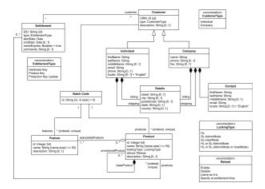
#### **──** Hospital domain UML class diagram example



#### Digital imaging in medicine - DICOM model of the real world

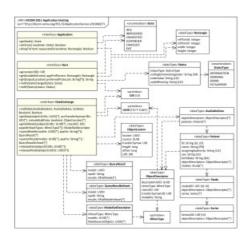


Sentinel HASP software licensing domain UML class diagram example

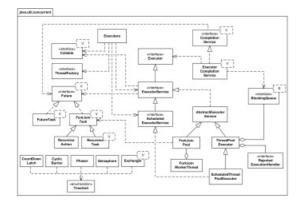


#### **APIs**

Digital imaging in medicine - DICOM Application Hosting API

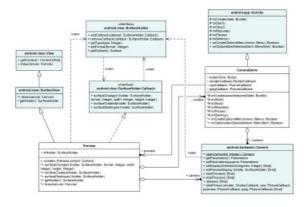


☐⇔ Java util.concurrent API UML class diagram examples

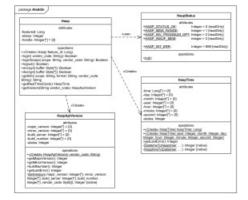


#### Implementation Models

Android Camera implementation classes

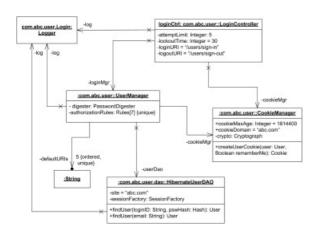


#### Sentinel HASP licensing UML class diagram of Aladdin package



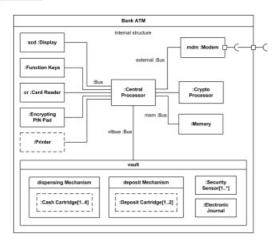
## **Object Diagrams**

**◯** Web application Login Controller object diagram

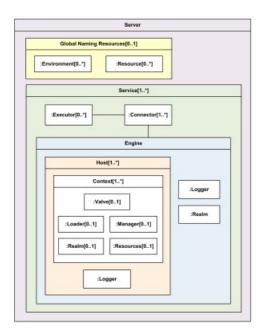


## **Composite Structure Diagrams**

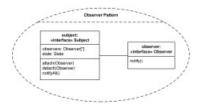
Bank ATM UML composite structure diagram example



 ${\bf Apache\ Tomcat\ 7\ web\ server\ UML\ composite\ structure\ diagram\ example}$ 

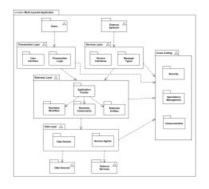


Observer design pattern as UML collaboration use example

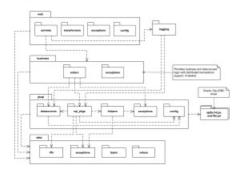


## **Package Diagrams**

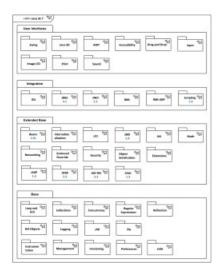
Multi-Layered Application Model



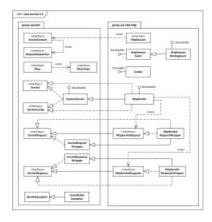
Multi-Layered Web Architecture



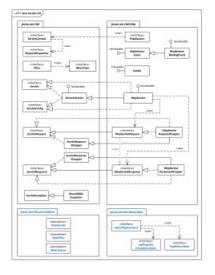
Java™ Platform Standard Edition 7 API UML package diagram example.



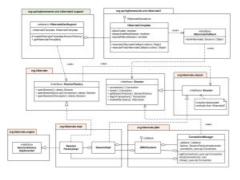
#### Java Servlet 2.5 API UML package diagram example



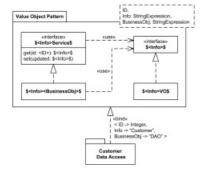
#### Java Servlet 3.0 API UML package diagram example



#### Spring and Hibernate ORM data access packages and classes

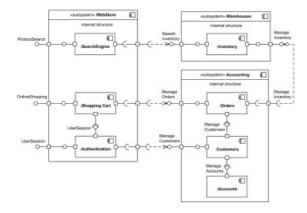




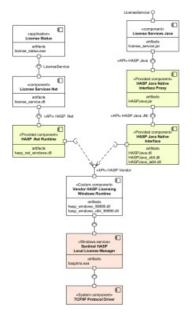


## **Component Diagrams**

## ☐ Online shopping component diagram

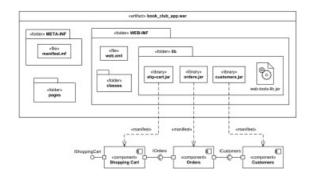


## ☐—☐— Sentinel HASP licensing components

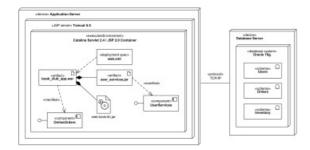


## **Deployment Diagrams**

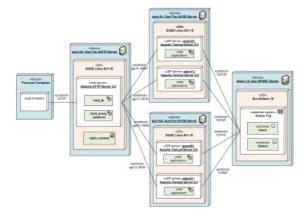
Online shopping web application manifestation



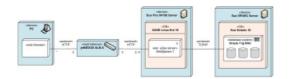
## Online shopping web application UML deployment diagram



## Clustered deployment of J2EE web application



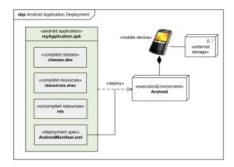
## Multilayered load balancing of J2EE servers



## Apple iTunes UML deployment diagram

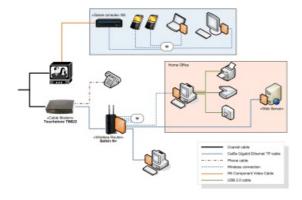


## Android application deployment

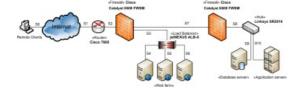


#### **Network Diagrams**

Home network diagram example



Web application network diagram example

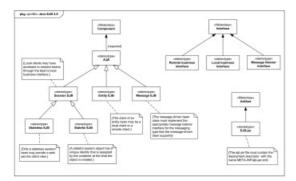


## **Profile Diagrams**

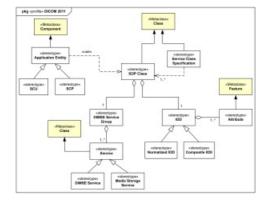
**□→** Service Oriented Architecture Modeling Language (SoaML) UML profile diagram examples



☐→☐ Java Enterprise JavaBeans (EJB) 3.0 UML Profile

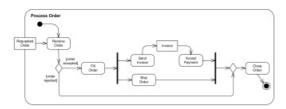


**□→** Digital Imaging and Communications in Medicine (DICOM) UML profile diagram example

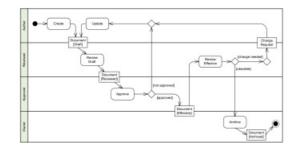


## **Activity Diagrams**

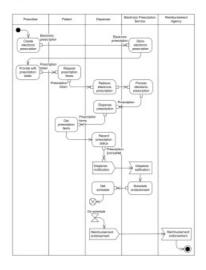
● Business flow - Process purchase order



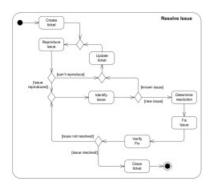
**●→** A Business flow - Document management process



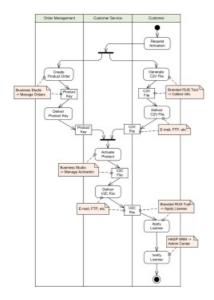
**●** A Electronic prescription service



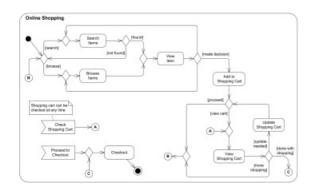
**●** A Software design - Resolve software issue



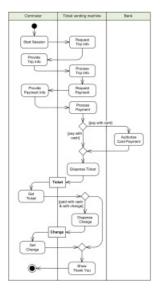
●→ A Software licensing - activation of Sentinel HASP SL provisional product UML activity diagram example



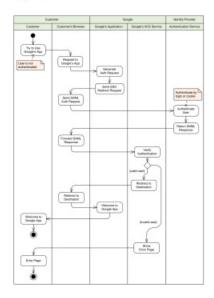
● Online shopping UML activity diagram



**→** A Ticket vending machine

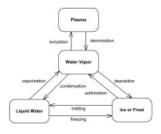


● ► A Web security - Single Sign-On (SSO) for Google Apps

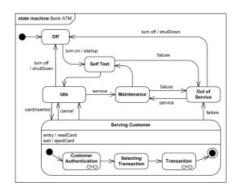


## **State Machine Diagrams**

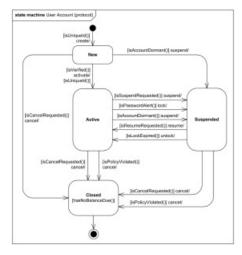
●→ S Water Phase Diagram as State Machine



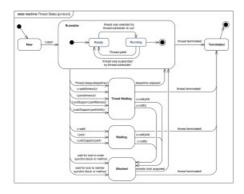
●→S Bank ATM behavioral state machine UML diagram example



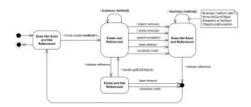
●→S Online shopping user account UML state machine diagram example



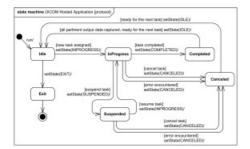
●→ S Java Thread states and life cycle UML protocol state machine example



●→ S Java EJB life cycle of a session object UML state machine example

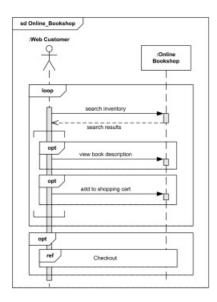


• S Digital Imaging and Communications in Medicine (DICOM) Hosted Application life cycle UML protocol state machine example

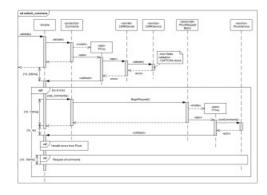


## **Sequence Diagrams**

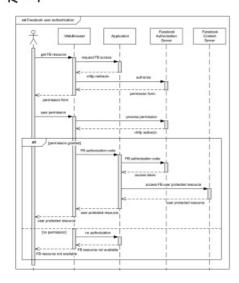
Online bookshop UML sequence diagram



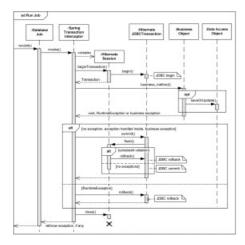
## Submit comments to Pluck using DWR, AJAX, JSON



# Facebook user authentication in a web application

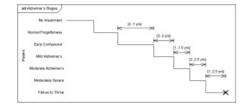


Spring and Hibernate transaction management

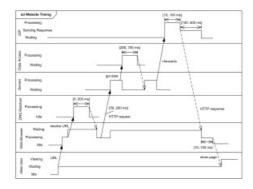


## **Timing Diagrams**

Medical domain - Stages of Alzheimer's disease UML timing diagram example

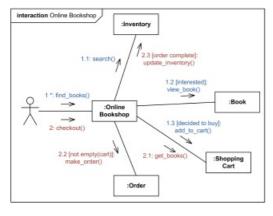


Web user experience - Website latency UML timing diagram example



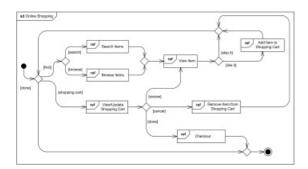
## **Communication Diagrams**



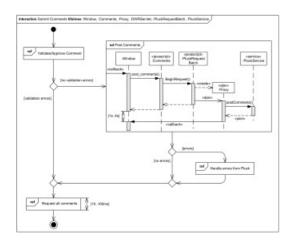


## **Interaction Overview Diagrams**

> Online shopping interaction overview diagram



☐ Submit comments to Pluck using DWR, AJAX, JSON



Noticed a spelling error? Select the text using the mouse and press  $\mathit{Ctrl} + \mathit{Enter}$ .











by <u>Kirill Fakhroutdinov</u>

This document describes UML versions up to UML 2.5 and is based on the corresponding OMG™ Unified Modeling Language™ (OMG UML®) specifications. UML diagrams were created in Microsoft® Visio® 2007-2016 using UML 2.x Visio Stencils. Lucidchart is a nice, free UML tool that I recommend for students.

You can send your comments and suggestions to webmaster at webmaster@uml-diagrams.org.

Copyright © 2009-2018 uml-diagrams.org. All rights reserved.