



**CONCERN-DRIVEN SOFTWARE DEVELOPMENT  
WITH  
JUCMNAV AND**

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# CONCERN-ORIENTATION



A **concern** groups related functionality across all software development phases (from requirements models to design models and implementation), and provides **three interfaces** to facilitate reuse

Variation Interface

Feature Model and Impact Model

Customization Interface

Class Diagram

Usage Interface



# DEMO OUTLINE

Generic Concern

## Bank Application

Feature Model

Impact Model

Workflow Model

## Design Models

Class View

Message View

←→  
compose

←→  
compose

←→  
compose

←→  
compose

## Authentication

Feature Model

Impact Model

Workflow Model

## Design Models

Class View

Message View

provided by Reusable  
Concern Library



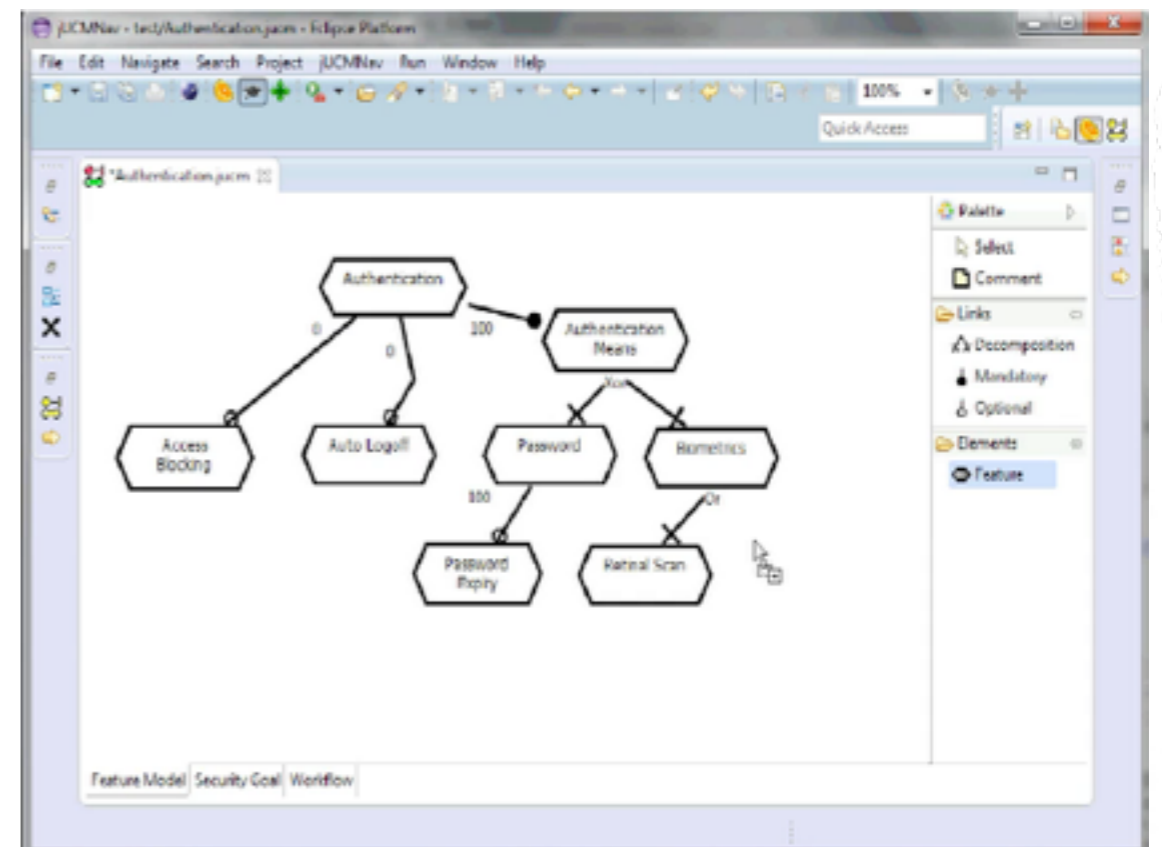
# JUCMNAV TOOL

- Free (EPL), open-source plug-in for **Eclipse**
- Fully supports the **URN standard**
- **Goal** Modeling and Analysis
- **Feature** Modeling and Analysis
- **Workflow/Scenario** Modeling and Analysis
- Support for **Aspect-oriented URN** and **CORE**
- **User-defined OCL** rules



Pronounced: juicy – em – nav

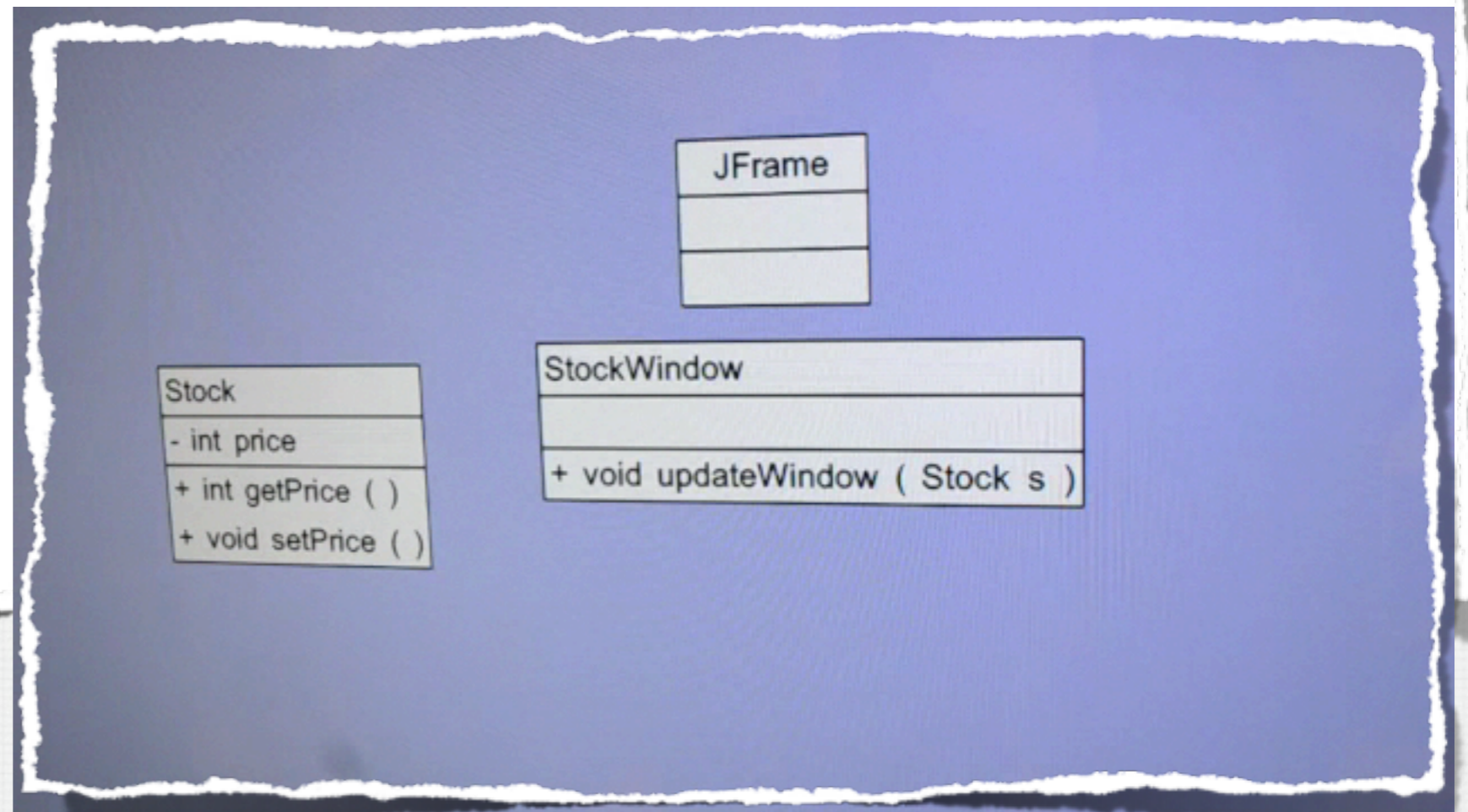
<http://jucmnav.softwareengineering.ca>





# TOUCHRAM

- A tool for **agile software design modelling**
  - **UML-based** modelling notation, with aspect-oriented extensions
    - Model structure and behaviour of design concerns in a reusable way with **class diagrams**, **sequence diagrams** and **state diagrams**
  - **Streamlined**, multi-touch enabled **user interface**
    - **Intuitive editing** using gestures
    - **Multi-user**
  - **Reusable** design concern **model library**
  - **Model hierarchies** support design with multiple layers of abstraction





# JUCMNAV & TOUCHRAM



Download jUCMNav: <http://jucmnav.softwareengineering.ca>

Download TouchRAM: <http://www.cs.mcgill.ca/~joerg/SEL/TouchRAM.html>