Implementation of a case study

(Seminar Organization)

Seminar Organization
Goal

• This implementation should enable a company (Teachware) to manage seminars, clients and lecturers more efficiently.
Seminar Organization
Functions

• To inform
• To book for a presentation
• To check out
• To cancel a presentation
• To acquire a lecturer
• To conduct a presentation
• To plan a presentation
• To develop a seminar

To inform

• Goal is to inform Teachware's associates (clients, companies or client managers) about seminars and presentations
• About the information they asked for
• Send them wanted information by mail, phone, fax, e-mail...
To book for a presentation

- Client or company want to register for a presentation
- Book interested party for desired presentation and notify it
- Or notify him/her that presentation is overbooked, does not exist, or booking is already made

To check out

- If client or company is no longer interested or is ill and can’t attend presentation
- Goal is to notify about canceling and send him/her a credit note
To cancel a presentation

- Presentation can’t be held and must be canceled
- All clients, docents, presentation custodians, and others are notified about canceled presentation
- Credit notes are sent to all clients

To acquire a lecturer

- Goal is to engage new docents as a part time associates for a new or existing seminar
- To send a contract to a new docent
To conduct a presentation

• Docents are conducting the presentation
• Preconditions: Presentation has enough participants and is not canceled

To plan a presentation

• Presentation needs to be scheduled
• Place and time must be fixed and reserved
• Presentation is ready to be conducted
To develop a seminar

- Goal is to develop a new seminar from idea
- Market examination
- Asking clients, companies, docents

Seminar Organization
Implementation

- Programming language
- Programming environment
- Packages
- Architecture
- Class diagram
- Database access
- Data structures
Programming language

• Java programming language
• Object oriented
• Strong type checking
• Very popular
• Highly portable
• Available on the most of the platforms

Programming environment

• Java(TM) 2 SDK, Standard Edition V1.3
• Designed for command line
• Notepad and UltraEdit
• Batch files
• Classpath = ?
• Requirements: Windows 9x with Java VM
Packages

- java.lang
- All standard Java packages and objects
- java.sql
- Package “oracle” and all sub packages
- javax.swing
- Com.borland.jbcl.layout
- Our own packages (booking, presentation, company)

Database access

- More ways of using databases
- We choose:
  - Register driver class,
    (“oracle.jdbc.driver.OracleDriver”)
  - Create connection
  - Work with database
  - Close connection
Class diagram

- Understand relations between objects
- What role does which object has in each function?

Objects

- Company
- Booking (client, company)
- Client
- Associate
- Docent
- Presentation (public, internal)
- Seminar
- Person
class Ancestor

- SemOrg.Classes.Ancestor
- An abstract class
- Superclass of all database elements
- Data manipulation in more general way

Lists of objects

- Company
- Booking (client, company)
- Client
- Associate
- Docent
- Presentation (public, internal)
- Seminar
- Person
List

- SemOrg.Classes.List
- An abstract class
- Superclass of all lists of objects
- Easy way of manipulation and representation content of database

Example:
Company and CompanyList

- CompanyT – one single company
  Properties and methods needed by Teachware
- CompanyListT – list of all companies
  Methods for adding, removing, modifying
Data structures

• Objects
  – Everything is object in Java
  – Property is private
  – Public getXXX and setXXX methods
  – Simple types (integer, string, date, ...)
  – Other types needed two properties that had to be developed also

• Lists
  – Lists of objects are objects
  – Property database
  – Methods for adding, removing, ...

Background and problems

• No previous knowledge about organization of seminars
• No such companies in our country
• Understanding of needed steps for some functions is gained only from “Seminar Organization Case Study” and unofficial discussions