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

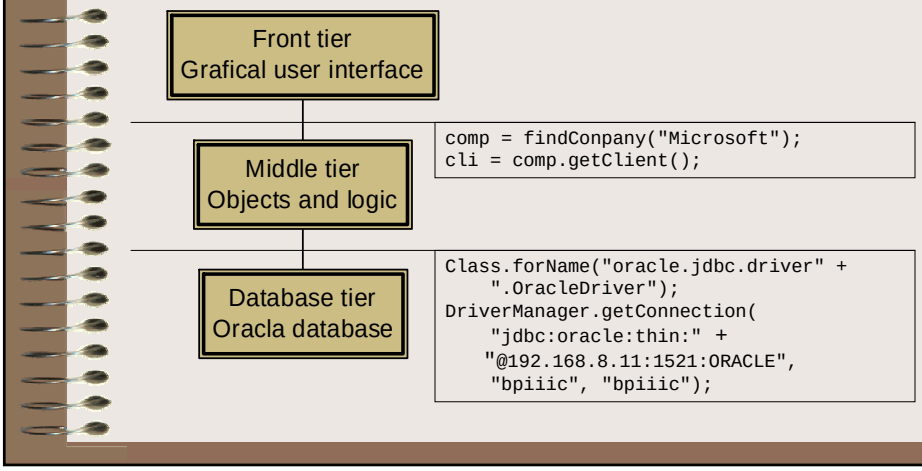
- java.lang
- All standard Java packages and objects
- java.sql
- Package “oracle” and all sub packages
- javax.swing
- Com.borland.jbcl.layout
- Our own packages (booking, presentation, company)

Database access

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

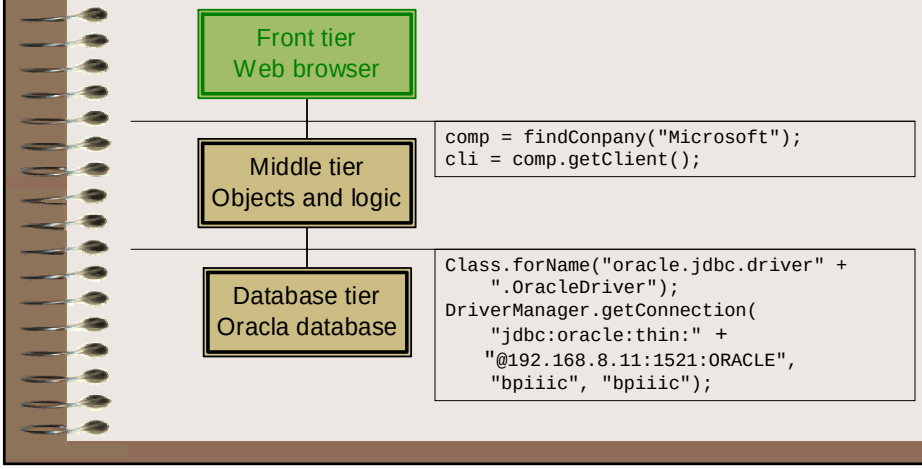
Architecture

Seminar Organisation Application

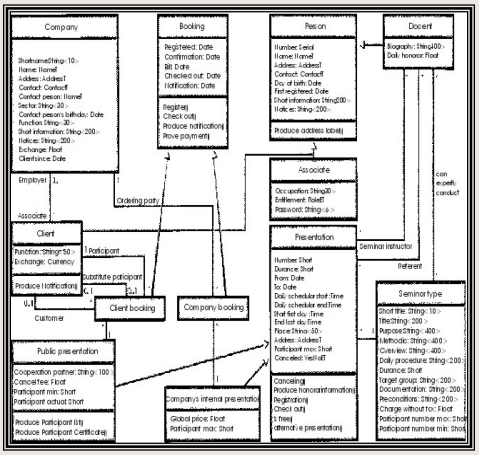


Architecture

Seminar Organisation Web



Class diagram



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

Objects

CompanyT

ShortNa

BookingT

PresentationT

on

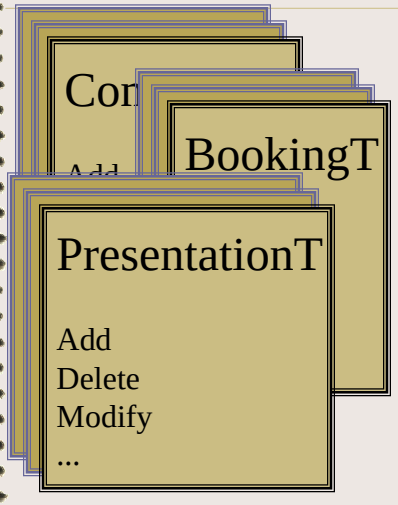
Durance
Place
ParticipantsMax
...

- 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
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- Docent
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  (public, internal)
- Seminar
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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