



# Aleksander Radwanski

## Software architect and senior developer

(Last update: December 2019)

### Skills overview

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Competencies	<p>Software architecture and design, web application and framework development in Java/JavaScript/JEE/Databases/SAP NetWeaver on the frontend/backend side, software tests, functional and technical specifications, technical documentation.</p> <p>Technical project management, leading of development teams.</p> <p>Trainings, workshops, seminars and coaching for software development in the areas of OOA/OOD/Design Patterns/UML, Java, JavaScript, JEE and more.</p>
Industries	<p>IT, consumer goods, customer services, education, trading, real estate, automotive, banking, insurance, pharma/chemistry</p>

### Contact details

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**Personal data**

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Year of birth	1968
Nationalities	Polish, German
IT experience since	1993
Languages	Polish      mother tongue
	English     fluent
	German     fluent
	Russian     basic

**Education**

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<i>1982 - 1986</i>	High school, Gliwice, Poland
<i>1986 - 1987</i>	Computer science, Technical University, Gliwice, Poland
<i>1989 - 1990</i>	High school, Göttingen, Germany
<i>1990 - 1993</i>	Computer science, Technical University, Karlsruhe, Germany

**Other courses**

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<i>2005</i>	Quality assurance for software development „SAP Sigma“, SAP AG, Walldorf, Germany
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## IT Competencies

### Project management

Technical project management, development team leading

### Programming languages, technologies, software & tools

**Java:** SE/JEE (JSP/JSF/Servlet/EJB/JPA/JMS), Eclipse, Tomcat, WebLogic, JBoss, WebSphere, Spring, Hibernate, EclipseLink, JUnit, Groovy, Ant, IntelliJ IDEA, NetBeans

**SAP:** SAP NetWeaver Portal 7.01-7.4, UWL, MAP, NWDS, WebDynpro/Java, JCo/RFC/ARFC2, PCD, WPC, KM, SAP E-Commerce

**Web:** HTML/CSS, JavaScript, jQuery, Angular.js, Ajax, JSON, XML/XSLT/XPath, Sencha Ext JS, web services with SOAP/REST, OData, WebStorm

**UML:** OO-Patterns, MS Visio, Star UML, Archimetric

**Other:** SQL, ABAP, C/C++, Perl, PHP, Agile, Jenkins, Maven, GIT, SVN, Perforce, MS Project, JIRA, Confluence

**Security:** PKI, SAML 2.0

**Cloud:** Amazon Web Services (AWS)

### Data bases

MySQL, Oracle, SQL Server, PostgreSQL, SAP MaxDB

### Operating systems

MS Windows, Linux

### Methodologies

Agile/SCRUM, Continuous Integration

## **Project references**

**09/2019 - 12/2019 Insurance, Stuttgart, Germany**

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**Role:** *Consultant, Senior developer*

**Project description:** *The objective of the project is the enhancement of an existing workflow web application for claiming internal employee business expenses.*

**Tasks:**

- *Requirements analysis*
- *Creation of technical designs/solutions for the requirements implementation*
- *Implementation of the new requirements (Java 6, SAP Webdynpro/Java, SAP Netweaver Portal 7.4, RFC)*
- *Consultancy in the areas of solution architecture*
- *Analysis of incidents*

**Skills:** *Java 6, SAP Webdynpro/Java, SAP Netweaver Portal 7.4, RFC/ARFC2, SAP NWDS/NWDI*

**01/2019 - 07/2019 Media, Cologne, Germany**

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**Role:** *Consultant, Senior developer*

**Project description:** *The objective of the project is the enhancement of an existing web application for management of advertising mediums (B2B)*

**Tasks:**

- *Requirements analysis*
- *Creation of technical designs/solutions for the requirements implementation*
- *Implementation of the new requirements (Java/JEE, Tomcat, SOAP/REST, Servlet/JSP, Spring, XML, SQL)*
- *Consultancy in the areas of solution architecture*
- *Analysis of incidents*
- *Creation of technical documentation*

**Skills:** *Java 7/8, Tomcat, SOAP/REST, Servlets/JSP, Spring, JPA, PostgreSQL 11, XML, GIT, JIRA, Maven, Confluence, Jenkins, IntelliJ IDEA*

**06/2018 - 12/2018**

**Insurance, Stuttgart, Germany**

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**Role:** *Technical project manager, Solution architect, Senior developer*

**Project description:** *The objective of the project was the enhancement of an existing web application for insurance offer and contract management (B2B)*

**Tasks:**

- *Requirements gathering and analysis*
- *Creation of technical designs/solutions for the requirements implementation*
- *Cost estimates*
- *Implementation of the new requirements (Java/JEE, IBM WebSphere, SOAP, Servlet/JSP, XML)*
- *Consultancy in the areas of system integration and solution architecture*
- *Analysis of incidents*
- *Creation of technical documentation*

**Skills:** *Java 8, JEE/IBM WebSphere 8.5/Tomcat, SOAP, Servlets/JSP, XML, JIRA, Confluence, Jenkins, Maven*

**07/2017 - 05/2018**

**Home appliance manufacturer, Gütersloh, Germany**

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**Role:** *Consultant, Solution architect, Senior developer*

**Project description:** *The objective of the project was the enhancement of the existing E-Commerce solution (B2B/B2C).*

**Tasks:**

- *Design and implementation of a web based system integration application (SOAP/REST, Java 8, Tomee+)*
- *Design and implementation of change requests within the existing E-Commerce applications (Java 6/7/8, SAP E-Commerce B2B/B2C, Java/JEE web applications/Tomcat)*
- *Design and implementation of system integration modules between SAP ERP (RFC JCo2/JCo3) and JEE based web applications (Tomcat/Java 6/8)*
- *Consultancy in the areas of system integration and solution architecture*
- *Analysis of incidents*
- *Creation of technical documentation*

**Skills:** *Java 6/7/8, SAP Netweaver (Java), JEE/Tomcat/Tomee+, SOAP/REST, JSON/XML, JSF(Primefaces), SAP E-Commerce, SAP RFC JCo2/JCo3, JIRA, Jenkins, Maven*

**02/2017 – 06/2017**

**Mechanical engineering, Bielefeld, Germany**

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**Role:** *Consultant, Solution architect, Delivery manager*

**Project description:** *The objective of the project was the enhancement and support of a web based, heterogeneous product ordering system.*

**Tasks:**

- *Consultancy in the areas of the solution architecture (JBoss EAP 7, Java/JEE, MySQL, CRM, SOAP/REST services, system integration)*
- *Planning and coordination of the development process*
- *Coordination of the development teams in the areas of requirements implementation and trouble shooting*
- *Analysis of incidents*

**Skills:** *Java 7, JEE/JBoss EAP 7, EJB, JSON/XML, JSF(Primefaces/Richfaces), JPA/Hibernate, MySQL, REST, WebServices, Camos, Baan, MS Dynamics, JIRA, Maven, Agile/SCRUM*

**09/2016 – 12/2016**

**Insurance, Wiesbaden, Germany**

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**Role:** *Consultant, Solution architect, Senior developer*

**Project description:** *The objective of the project was the enhancement and support of numerous web portals.*

**Tasks:**

- *Consultancy in the areas of the solution architecture (JBoss EAP 6/7, Java/JEE, MySQL, XML, system integration with legacy host systems)*
- *Development of new requirements within existing portal solutions including:*
  - *Enhancements of the user interfaces (JSF, Struts)*
  - *Enhancements of the database models (JPA/Hibernate, MySQL)*
  - *Enhancements of the business logic (EJB)*
  - *Analysis of incidents within the system integration layer (WebServices)*
  - *Development of unit tests with JUnit*

**Skills:** *Java 7, JEE/JBoss EAP, JavaScript, JSF (Richfaces), Struts, JPA/MySQL, SQL, XML, WebServices, JIRA, Maven, Agile/SCRUM*

**Role:** *Consultant, Solution architect, Senior developer*

**Project description:** *The objective of the project was the enhancement of a complex and heterogeneous e-commerce solution for selling consumer goods and customer care.*

**Tasks:**

- *Consultancy in the areas of solution architecture*
- *Consultancy in the area of DevOps*
- *Design and implementation of a web application (deployed to Elastic Beanstalk on AWS) to perform the replication of the product database, including:*
  - *Development of the integration interface to an OData service for querying the product data (JSON)*
  - *Development of the persistence layer including MySQL (RDS instance on AWS) and JPA/EclipseLink*
  - *Development of the business logic with Java, Quartz Scheduler*
  - *Development of the Web-API with REST (Jersey)*
  - *Development of the user interface with HTML, JavaScript, Bootstrap, JQuery, Ajax*
  - *Unittests with JUnit*
- *Creation of the technical specification*
- *Creation of the operation manual*

**Skills:** *Java 8, JEE/Tomcat 8, JavaScript, Bootstrap, JQuery, Ajax, MySQL, SQL, JSON, UML, AWS (Elastic Beanstalk, RDS, EC2), GIT, JIRA, Confluence, Jenkins, Maven*

**Role:** *Consultant, Business analyst, Senior developer*

**Project description:** *The main objective of the project is to build a web application to support an internal chemical substance exchange between different customer departments.*

**Tasks:**

- *Analysis and technical design of the solution including:*
  - *Design of the solution architecture*
  - *OOA/OOD*
  - *Technical design of the user interfaces*
- *Development of the following parts:*
  - *Integration with the Oracle database (PL/SQL) based on JDBC*
  - *Business logic with Java/Spring*
  - *User interface with Java, JavaScript, JQuery, JSF (MyFaces/Richfaces), Ajax*
  - *Unit tests with JUnit*
- *Creation of the technical specification (UML)*

**Skills:** *Java 8, Tomcat, JSF 2 (MyFaces, Richfaces), JavaScript, JQuery, Ajax, Spring, Oracle, JDBC, SQL, XML, FOP, JUnit, Jenkins, Maven, UML*



**Role:** *Consultant, Business analyst, Architect*

**Project description:** *The main objective of the project was to build a web application for an approval based business process (workflow) of chemical substance deliveries. This web application should replace an existing Lotus-Notes solution.*

**Tasks:**

- *Business analysis:*
  - *Capturing of business requirements (interviews with end users)*
  - *Analysis and estimation (effort/complexity) of business requirements*
  - *Creation of the functional specification*
- *Analysis and technical design of the solution including:*
  - *Design of the solution architecture*
  - *Design of the database model*
  - *OOA/OOD*
  - *Technical design of the user interfaces*
  - *Design of the integration interfaces to other systems*
- *Development of a prototype (UI with Sencha EXT JS)*
- *Creation of the technical specification (UML)*
- *Functional and technical support of the development team (off-shore, India) during the development phase*
- *Execution of code-reviews as part of the quality assessment*

**Skills:** *Java 8, Tomcat, JSF 2 (MyFaces, Richfaces), JavaScript, JQuery, Sencha Ext JS, Ajax, Spring, Oracle, JDBC, SQL, XML, FOP, JUnit, Jenkins, Maven, UML*

**Role:** *Consultant/Senior developer for web services*

**Project description:** *The main objective of the project was to build a layer of SOAP/REST based web services for Mobile-Apps and portal applications in the areas of B2B, B2C and B2E. The development and production platform for the project is the product CA API (former Layer 7).*

**Tasks:**

- *Implementation of SOAP/REST web services based on given functional specifications with a development tool CA Policy Manager including:*
  - *Authentication with PKI & User/Password*
  - *Processing of SOAP-Messages*
  - *Processing of XML with XPath*
  - *XSLT Transformations, in particular XML to JSON*
  - *Database access with SQL*
- *Implementation and execution of web services tests with the testing tool SoapUI*

**Skills:** *Web services (SOAP, REST), XML/XSLT, XPath, JSON, HTTP 1.1, SQL, SoapUI, CA API (Layer 7), CA Policy Manager*

**Role:** SAP NetWeaver Portal Consultant

**Project description:** The main objective of the project was to enhance the existing portal solution with:

- Additional authentication method based on PKI/SAML 2.0
- New custom user management application
- New user interaction traceability module

The existing portal solution was build upon a numerous WebDynpro/Java, PCD, WPC and KM components integrated with a SAP CRM backend system via RFC/ARFC2 and is offered to more than 200.000 company customers and more than 1.000.000 individual end-users over the internet.

**Tasks:**

- Gathering, analysis and effort/complexity estimations for business requirements
- Technical analysis and design of the solution including:
  - Integration of 3<sup>rd</sup> party services for the PKI/SAML 2.0 (IdP) authentication
  - Design of the user management solution (UML)
  - Design of the user interaction traceability solution (UML)
- Development:
  - Implementation of a JAAS based login module for the SAML 2.0 authentication as an enhancement for the existing SAP SAML2 login module
  - Implementation of a JSP/Servlet based login application as a replacement for the existing SAP Portal login pages
  - Implementation of an ARFC2 based Java API as an integration layer between SAP Portal and SAP CRM backend
  - Implementation of the user management application based on WebDynpro/Java and ARFC2 models
  - Implementation of the user interaction traceability module based on:
    - Persistence with JPA/Dictionary
    - Services with EJB session beans
    - Web services with Servlet/JSON
    - User interface with WebDynpro/Java

**Skills:** SAP ERP/NetWeaver 7.3 (Portal, NWDS), WebDynpro/Java, Java 6, JEE (Servlet/JSP, EJB/JPA), SAML 2.0, XML, Web-Services, JavaScript, ARFC2/RFC, UML

**Role:** *Technical Architect/Development Team Leader/Senior Developer*

**Project description:** *The main objective of the project was to design and build an intranet portal offering employee self-services and manager self-services as a custom-made solution based on functional, technical and user-experience specifications provided by the client. The technological platform for the solution was the SAP NetWeaver with ECC 5 (ABAP, ISR, HR, Workflow) as a backbone for data and business logic, the SAP NetWeaver Portal 7.3 (Java/JEE/AJAX/JavaScript/jQuery) for the GUI and the Adaptive RFC2 Framework for the integration between portal/Java with backend/ABAP. The scope of the solution contained a series of standalone but interacting applications with partially individual configurations for the numerous affiliates in over 80 countries and 23 languages:*

- *Employee Profile: management of personal data for employees based on Direct Data Posting and Data Posting via Service-Center*
- *Team View, Employee Move Form, Recruit And Hire Form, Contract Extension Form, Resignation Form, Upgrade/Downgrade Form, Awards Form: management of teams, org-structures, etc. based on the SAP Workflow*
- *Create/Change/Cancel Position Form, Change Org Unit Form, Job Description: management of positions based on the SAP Workflow*
- *Worklist: custom-made SAP Workflow integration based on the SAP UWL API and RFC*
- *HR Updates, Did You Know, Dates to follow up: information services*

*The project was deployed for production in 12.2012.*

**Tasks:**

- *In the role as technical architect:*
  - *Analysis and design of the entire framework and applications architecture on the portal and Java side including the integration with the SAP backend (design patterns, UML)*
  - *Design and implementation of prototypes as case studies for feasibility and performance in Java/EJB/JSP/JavaScript/jQuery/JSON*
  - *Effort estimation for design, development and test of numerous technical and functional requirements*
  - *Creation of documentation (architecture, design and technical specifications)*

- *In the role as development team leader:*
  - *Development management (task planning and supervising) of a combined on- and offshore team of more than 10 Java/Web developers from different countries (India, Italy, Philippines, Poland)*
  - *Quality assurance (Code-Reviews)*
- *In the role as senior software development:*
  - *Development of particular framework components (ARFC2 modules, JPA modules, EJB modules, AJAX modules, forms framework in JavaScript/jQuery) and applications: Employee Move Form, Worklist based on Java/Servlets/EJB/JavaScript/jQuery*

*Knowledge transfer to the developers concerning software development and particular technologies*

***Skills:*** *SAP ERP/NetWeaver 7.3 (Portal, UWL, NWDS), Java 6, JEE (JSP/Servlets/EJB/JPA), JavaScript, AJAX, jQuery, JSON, ARFC2/JCo/RFC, UML (OO-Patterns), JUnit, MS Project, MS Visio*

**Role:** Consultant/Senior Developer

**Project description:** The objective of the project was to design and build a web based software system – as a replacement for an old host based solution – for automated calculating and billing of consumption of utility services for properties. The entire business process starting with contract assignment, installation of measurement hardware up to creation of billing documents was implemented as IT-solution. The system was deployed for production in 2009 and parts of it are exposed as self-service to the clients via internet. The main architectural components: SAP ERP 7.01 for the backend tier and SAP NetWeaver Portal 7.01 with WebDynpro/Java for the frontend tier.

**Tasks:** The main responsibility was to implement new requirements and perform bug fixing in an already in major parts existing application called „Cost and user setup“ on the frontend side (SAP Portal, WebDynpro/Java, RFC/JCo). As first action an extensive reverse-engineering for full understanding of the as-is solution was performed and specific documentation (mainly UML) was created. To implement upcoming requirements a complex refactoring was necessary, for which a refactoring-design was introduced and successfully implemented. This design contained a corrected architecture of the application layers on the portal side (data access via RFC, MVC) and a major restructuring of the UI (WebDynpro Views/Controllers, Navigation, Error handling, Validation, etc.). For the new requirements and change requests technical specifications were created and implemented.

**Skills:** SAP ERP/NetWeaver 7.01 (Portal, NWDS), Java 1.4.2, WebDynpro/Java, ABAP, RFC/JCo, UML (OO-Patterns), JUnit, Bugzilla

**Role:** Consultant/Architect/Senior Developer

**Project description:** The customer requested an extensive consultancy for the planned technology switch regarding the development of his web applications from PHP/Perl/CGI to a java based platform. For this purpose the customer web-application „User Management“ was implemented from scratch based on java technologies as a case study for feasibility check and migration and also to provide a deep knowledge transfer to the customer development team.

**Tasks:** Re-development of a an application „User Management“ based on:

- OOA/OOD and UML
- UI with JSP/Servlet/HTML/JavaScript/JSF on Tomcat
- Business logic in Java and Groovy
- Persistence with Hibernate/MySQL/Oracle/MS SQL Server
- Integration of customer search engine with JEE web applications based on a proprietary Java-API
- Knowledge transfer regarding Java/JEE
- Creation of technical specifications

**Skills:** Java 5, JEE 5 (Tomcat 6), Groovy, Hibernate 3.0, SQL, UML (OO-Patterns), Eclipse, JUnit, Oracle, MS SQL Server, Subversion, Ant, Linux

**Role:** Consultant/Senior Developer

**Project description:** The project objective was to implement a mobile logistics application based on the SAP Mobile Application Platform for laptop devices. The functional scope included the partial implementation of the standard SAP modules MM, PM and HR as mobile applications. The quality assurance was guaranteed by the incorporation of the SAP Sigma standards and intensive use of unit tests and UI tests performed with the JUnit and TestPartner tools.

**Tasks:** The main responsibility was to create technical designs and perform their implementation and testing for the frontend parts of the entire solution based on the given functional specifications:

- In MM: Material Master, Goods Movement (WebDynpro/Java)
- In HR: Organization, Personnel (WebDynpro/Java)

The responsibilities contained also the creation of architectural designs for the client tier including the definitions of the layer interfaces and modeling the business objects. In the area of QA a significant contribution in the design of the automated testing infrastructure was made.

**Skills:** SAP ERP/NetWeaver 6.40/7.1 (MI/Mobile Application Platform, NWDS, MaxDB), WebDynpro/Java, Java 1.4.2, ABAP, SQL, XML, UML (OO-Patterns), Ant, Perforce, JUnit, SAP Sigma



**Role:** Consultant/Senior Developer

**Project description:** The objective of the project was an implementation of a web based software system for project management and to support automated build processes for numerous customer java IT-projects. The system should include the management of project dependencies and creation of a central archive repository for the build packages. The new solution should replace old Perl based building scripts.

**Tasks:** The main responsibility was to design and implement the above described application and the following tasks were performed:

- Creation of technical specifications
- Implementation and test of the following development modules:
  - Business logic in Java
  - Data access to a project database (MySQL/XML)
  - Perforce Java interface (JNI/C++) for source files synchronization
  - Integration of Ant
  - XML/XSLT build process log generation with web access
  - JUnit tests

**Skills:** Java/JEE, C++, Perl, HTML/XML/XSLT, MySQL, SQL, UML (OO-Patterns), JUnit, Ant, Perforce

**Role:** Architect/Senior Developer

**Project description:** The project objective was an implementation of a web based customer management application as a replacement for an old MS-Access based solution. The new solution was designed as classical 3-tier J2EE architecture. A C++/MFC client for MS Windows connected via SOAP to the J2EE backend was implemented in addition.

**Tasks:** The main responsibility was to design and implement the above described web application and the following tasks were performed:

- Technical design and creation of technical specifications
- OOA/OOD with Together 5.5
- Implementation of the following modules:
  - Persistence/Business logic with EJB 1.1
  - Server SOAP-Interface with Apache SOAP, Axis
  - Client SOAP-Interface with C++ (gSOAP)
  - Web-UI with JSP/Servlet/HTML
  - Unit-tests with JUnit
- Creation of documentation

**Skills:** Java/J2EE, C++/MFC, SOAP, Axis, gSOAP, JBoss 2, PostgreSQL, SQL, UML (OO-Patterns), JUnit, Ant, JBuilder 6, Visual Studio 6

**Role:** Architect/Senior Developer/Development Team Leader

**Project description:** The objective of the project was to build a web based software system for selling and renting DVD movies and electronic high-tech goods with the following main components:

- *Web-Portal with E-Commerce functionalities:*
  - *Online shop with a product catalog*
  - *Online rent service for DVD movies*
- *MS Windows client to fully manage the rental service and customers supporting online and offline working modes*

The web solution was based on the BEA WebLogic 5.5/SQL Server 7. The MS Windows Client was implemented in Java/Swing and due to the requirement of supporting also offline working mode (no connection to the main database) a local MS-Access database and XML-RPC based data synchronization module was implemented.

**Tasks:** The main responsibility was to design and implement particular modules from the above described web application. The following tasks were performed:

- *Development team leader*
  - *Development management (task planning and supervising)*
  - *Quality assurance*
  - *Training*
- *Architect*
  - *Technical design of the entire solution with OOA/OOD/UML (Together 5)*
  - *Creation of documentation*
- *Senior developer:*
  - *Development of particular application and framework modules: persistence/business logic with EJB 1.1, Java/JNI interface for credit card payments, Swing client with JDBC/MS-Access, data synchronization interface (EJB/XML-RPC), UI with*

**Skills:** Java/J2EE, C, XML-RPC, BEA WebLogic 5.0, SQL Server 7, MS Access, JBuilder 5, Ant, JUnit

**Role:** Architect/Senior Developer/Development Team Leader

**Project description:** The objective of the project was to build a web based real-estate trading platform linked to offers of numerous real-estate trading companies' e-commerce systems (B2B/B2C). The system should include the following main components:

- Online catalog with an extensive search and navigation functionality
- Customer management
- Customer application for property management and a data interface to the web-portal

The technical platform for the solution was the IBM WebSphere 3.5, Oracle 8 and RedHat Linux. The property management application was implemented as a MS Windows C++/MFC/MS Access solution with XML backend interface.

**Tasks:** The main responsibility was to design and implement particular modules from the above described solution. The following tasks were performed:

- Development team leader
  - Development management (task planning and supervising)
  - Quality assurance
  - Training
- Architect
  - Technical design of the entire solution with OOA/OOD/UML (Together 5)
  - Creation of documentation
- Senior developer:
  - Development of particular application and framework modules: persistence/business logic with EJB 1.1, XML interface (Servlets, Xerces, C++), MS Windows Client application (C++/MFC, MS Access), JUnit tests

**Skills:** Java/J2EE, C++, MFC, IBM WebSphere 3.5, Oracle 8, MS Access, JBuilder 5, Visual C++, UML (OO-Patterns), Together 5, Ant, JUnit

**Role:** Architect/Senior Developer/Development Team Leader

**Project description:** The objective of the project was to build a workshop management system (courses, scheduling, participants, etc.) as an intranet web based application connected via CORBA interface to the remote customer data sources. The main components: Sun Solaris, Apache Tomcat as JSP/Servlet engine, Visi Broker as CORBA platform.

**Tasks:** The main responsibility was to design and implement particular modules from the above described solution. The following tasks were performed:

- Development team leader
  - Development management (task planning and supervising)
  - Quality assurance
  - Training
- Architect
  - Technical design of the entire solution with OOA/OOD/UML (Together 5)
  - Creation of documentation
- Senior developer
- Development of particular application and framework modules: CORBA interface with Java/C++ and Visi Broker, business logic with Java, UI with JSP/Servlet on Apache Tomcat, JUnit tests

**Skills:** Java/J2EE, C++, CORBA, Visi Broker, SQL Server 7, Sun Solaris, Apache Tomcat, UML (OO-Patterns), Together 5, Ant, JUnit