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DataArt: Java Development

DataArt is a recognized expert in Java development. Our Java team has extensive experience developing various kinds of applications, including three-tier enterprise applications that apply Web-based and/or rich user interface. Rich client applications can use Java Web Start or Java Applet technologies for deployment. Although three-tier architecture is currently the most commonly used application, the team also has experience building and deploying two-tier architecture applications. If a customer wants a mobile solution, DataArt capabilities include (but are not limited to) J2ME development experience.

Middleware

DataArt develops enterprise and Web applications using different application servers and Web containers, with JBoss and Tomcat among the most frequently used.

DataArt professionals work with various middleware technologies that demand different approaches. They have experience working with lightweight combinations, such as Spring and Tomcat, as well as industry standards, such as EJB deployed to JBoss and custom-made frameworks.

Presentation Layer

All Java Web applications developed by DataArt are based on cutting edge technologies, such as JSF, Spring MVC, Struts2, AJAX and GWT. Their use helps avoid excessive reliance on Java code in Web pages and separate business logic from the presentation level. The most recently implemented projects used AJAX extensively, as well as third-party components with AJAX support (IceFaces, GWT) and custom developed JavaScript components optimized for cross-browser work.

DataArt also integrates applications with Java-powered back-ends and non-Java-powered frontends.

Rich Client (Desktop) Applications

Although a Web-based client is most often used in modern enterprise applications, there are a lot of applications designed to be “rich” that utilize UI features that HTML-based Web clients do not support. The DataArt team can develop such desktop applications, based, for example, on Swing Framework or Eclipse Rich Client platforms.

Databases and Data Access

Most complex applications use databases. DataArt has worked with different DBMSs, from MySQL and PostgreSQL to Oracle and MS SQL, and developed special APIs for common operations (such as page output, inserting and updating records), which took into account the databases' special features and types, optimizing them accordingly. DataArt also has strong experience in building data warehouse and database clustering based on open source solutions. The team can utilize ORM technologies or pure JDBC depending on the customer's needs.

Reporting

DataArt works with a wide range of reporting tools, including JasperSoft, BIRT and Crystal Reports, and has experience creating custom reports using XML-FO and iText.

XML, XSL, XSL-FO

DataArt is an expert in XML, XSL and XSLT. A good example of utilizing XML and XSL is the production of PDF-formatted reports using the XSL-FO open standard and its Open Source adaptation Apache FOP (<http://xml.apache.org/fop/>).

Brand Technology Stack Expertise

During a project architecture planning phase, DataArt architects aim to use a full framework stack supplied by one vendor, such as a JBoss stack (Hibernate-Seam-jBPM-RichFaces), that provides frameworks fitting most project requirements.



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Technical Capabilities

- **Middleware technologies**
 - EJB
 - Spring
 - Google Guice
 - JBoss Seam
- **Application Servers**
 - JBoss
 - Apache Tomcat
 - Oracle AS
 - Oracle Weblogic (former BEA Weblogic)
- **Business Rules and Business Process Management**
 - JBoss drools
 - jBPM
- **Presentation Layer**
 - JSF and JSF-based frameworks:
 - Spring MVC
 - Struts2
 - AJAX Frameworks
- **Desktop Applications**
 - Swing
 - SWT
- **Unit Testing**
 - JUnit
 - TestNG
- **Data access**
 - JPA
 - JDBC
- **Reporting**
 - Jasper Reports
 - BIRT
 - Crystal Reports
 - iText
 - XSL-FO
 - Apache POI
- **Distributed Applications**
 - Web services
 - RMI
 - JMS
- **Advanced Technologies**
 - AOP
 - Reflection
 - Globalization
 - Multi-threading
 - Deployment
 - Java Web Start
 - Java Applet