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IBM

Object Oriented Software Engineering with Java for iSeries (Course Number S6222)

Abstract

Object oriented software engineering is the next stage in the evolution of software construction methods that allows the engineer to construct software through the abstraction of real world entities into software architecture. To successfully employ this paradigm, one must understand the fundamentals and the methods that can be used in order to reap the benefits that it offers. This course is a fast paced introduction to object oriented software engineering and also to the Java programming language - a tool to implement object oriented software.

Audience: Programmers, software engineers, and technical managers.

Duration: 4.5 Days

Enrollment:
http://www-3.ibm.com/services/learning/us/
(Search on S6222)

Format
Combined classroom lecture and hands-on workshop.

Prerequisites
The student should have a background in basic software engineering and computer programming.

The course will consist of two parts. The first part will focus on the paradigm of object oriented software construction. The student will explore the advantages of the paradigm over other approaches, and the fundamentals of the object model. Use-cases as an effective means of capturing requirements and developing software architecture will be explored, as well as analysis and design methods, including design patterns, which allow the engineer to decompose and synthesize a software solution from the requirements. The tools used to express object oriented designs will be explored including the Unified Modeling Language (UML) and various object oriented programming languages (OOPLs). Finally, components will be explored as the next stage of software construction evolution that attempts to facilitate reuse.

The second part of the course will focus on the Java programming language. Java is an object oriented programming language (OOPL) that can be used to express object oriented designs. An overview of the Java language, the supporting framework, including RMI, JDBC, and the AS/400 Toolbox for Java, and the tools of the development environment for the iSeries platform, including VisualAge for Java, will be discussed. Also to be explored is the supporting iSeries architecture that allows server-side Java applications

to realize significant performance improvements over other platforms. Finally, Java integration with iSeries and AS/400 legacy applications will be discussed. The student will then have the opportunity to apply this new knowledge through hands-on experience by developing and deploying simple Java applications to the iSeries platform.

Remarks

As this course is intended only as an introduction to the key concepts of object oriented software construction, the student should not expect to become proficient in this paradigm at the end of the course. Proficiency in any engineering discipline requires many months and years of hands on experience and continuous learning. However, by understanding the fundamentals and key focus areas, the student will be empowered (and encouraged) to continue their development on their own initiative.

Day	Topics
1	Introduction to Object Oriented Software Engineering Object Model Fundamentals Use-cases Object Oriented Analysis and Design
2	Overview of the Unified Modleing Language (UML) Design Patterns and Reuse Object Oriented Programming Languages Components
3	Introduction to the Java Language and Runtime Environment Java Programming Environment for iSeries Accessing iSeries and AS/400 Data from Java Java Interoperability with Legacy Applications Performance Considersation
4	Introduction to VisualAge for Java Java Programming Hands-on Workshop
5	Java Programming Workshop Wrap Up Recommendations for Education *Next Steps* Course Feedback