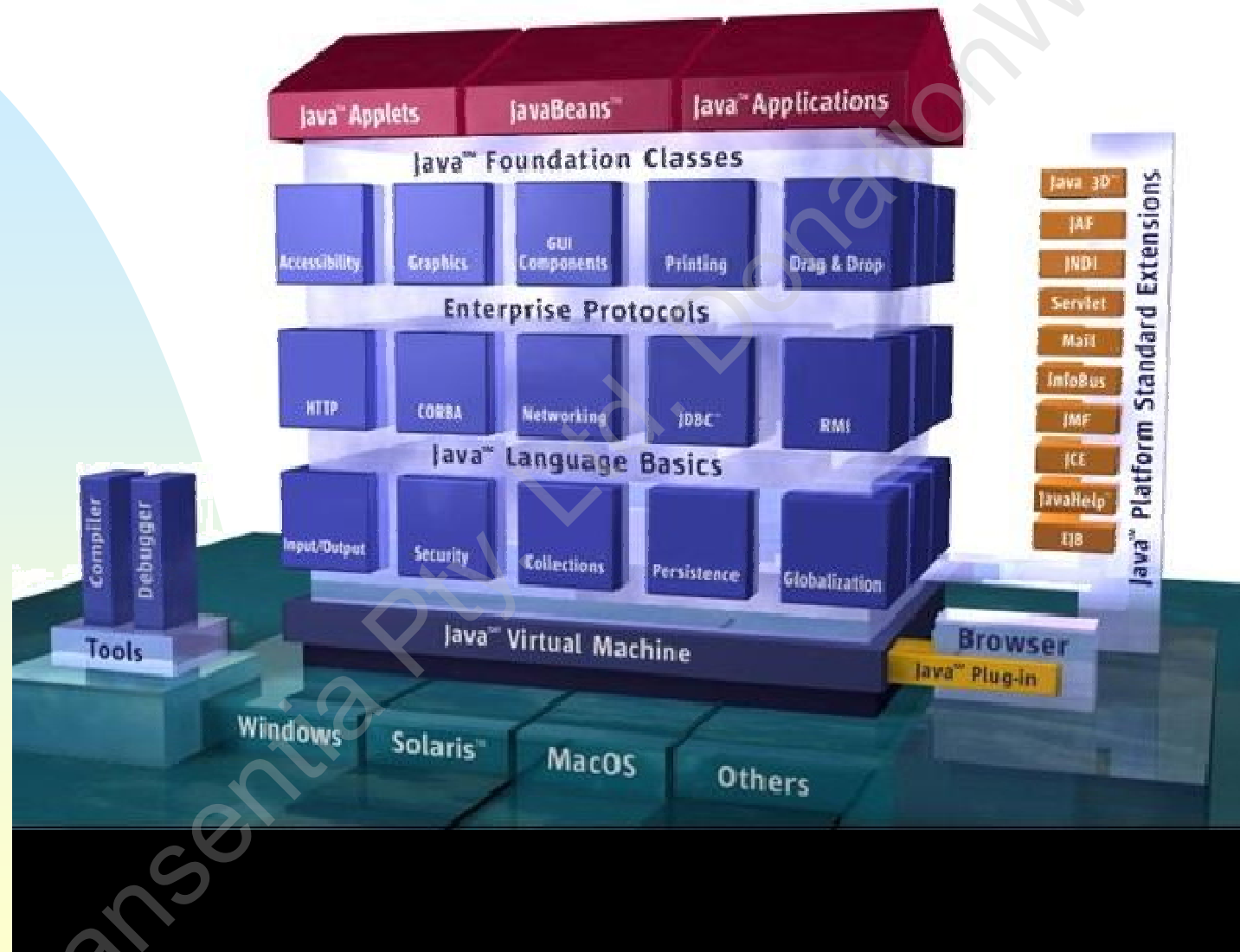


The Java 2 Platform



Sunday, July 05, 2009

Top Layer

- Java Applets
 - ◆ Small programs written in the Java programming language that can be embedded in a web page and then viewed in a browser *
- JavaBeans
 - ◆ Cross-platform component architecture that enables easy development and reusability of customized and third-party software components
- Java Applications
 - ◆ Applications written in the Java programming language and thus portable across all major computer platforms

* taken/paraphrased from Sun web site at <http://java.sun.com/jdk/explore/>

Sunday, July 05, 2009

Java Foundation Classes (I)

- Accessibility
 - ◆ Adds assistive technologies such as screen readers, screen magnifiers and speech recognition to Java
- Graphics
 - ◆ An API (“Java2D”) that handles arbitrary shapes, text, and images and provides a uniform mechanism for manipulating them
- GUI Components (formerly ‘Swing’)
 - ◆ An expanded set of rich, flexible JavaBeans components that provide high-level graphical user interface (GUI) elements for building Java technology-based applications

Java Foundation Classes (II)

- Printing
 - ◆ Support for simple integration of printing across multiple platforms, for direct or networked printer connections
- Drag & Drop
 - ◆ An API enabling dragging and dropping text, graphics, or other components between Java technology-based applications and native platform programs

Enterprise Protocols (I)

- HTTP

- ◆ (Hypertext Transfer Protocol). Enables sharing of documents and data over the Internet.

- CORBA

- ◆ (Common Object Request Broker Architecture). Provided as “Java IDL”, enables standards-based interoperability and connectivity for distributed Java applications.

- Networking

- ◆ Core classes providing the basic facilities (“Sockets”) required to communicate across a network

Java Foundation Classes (II)

- JDBC

- ◆ (Java Database Connection). An API supporting SQL-based database access and enabling access to existing corporate data.

- RMI

- ◆ A set of APIs and a model for remote objects that enables developers to build applications with distributed, automatic management of objects from machine to machine over the network

Java Language Basics (I)

- Input/Output
 - ◆ A core API providing system classes with cross-platform facilities for transferring data in and out of Java technology-based applications
- Security
 - ◆ An enhanced, fine-grained, and easily configured security model that allows users and system administrators to provide control over virtually all aspects of enterprise applet, component, servlet, application, and data safety
- Collections
 - ◆ A unified architecture framework for representing and manipulating collections that reduces programming effort while increasing performance and fostering reuse

Java Language Basics (II)

- Persistence

- ◆ A serialization API and underlying infrastructure that allows an application to preserve state beyond its life-span in runtime memory

- Globalization

- ◆ A new framework that allows enterprise developers to build internationalized applications supporting complex character-based fonts, such as Kanji and Chinese

Standard Extensions (I)

- Java 3D

- ◆ An API allowing developers to quickly and easily incorporate 3D graphics into their applets and applications for such tasks as financial analysis, data mining, and MCAD

- JAF

- ◆ (JavaBeans Activation Framework). Allows developers to take advantage of standard services to determine the type of an arbitrary piece of data and detect the operations available on it

Standard Extensions (II)

- JNDI

- ◆ (Java Naming and Directory Interface). Provides a unified interface to and enables seamless connectivity with multiple naming and directory services in the enterprise.

- Servlet

- ◆ An architecture for protocol and platform-independent server-side components that dynamically extend Java enabled servers

- Mail

- ◆ An API that provides a cross-platform and protocol-independent framework to build Java technology-based mail and messaging applications

Standard Extensions (III)

- InfoBus
 - ◆ Enables dynamic exchange of data between JavaBeans components by defining a small number of interfaces between cooperating Beans and specifying the protocol for use of those interfaces
- JMF
 - ◆ (Java Media Framework). An API specifying a simple, unified architecture, messaging protocol, and programming interface for media players, media capture, and conferencing.

Standard Extensions (IV)

- JCE

- ◆ (Java Cryptography Extension). A comprehensive cryptography toolkit that creates a standard set of APIs for advanced Java software-based encryption technologies.

- JavaHelp

- ◆ A full-featured, extensible help system that enables developers and authors to incorporate online help into Java technology-based products

- EJB

- ◆ (Enterprise JavaBeans). A component model, ideal for the enterprise, enabling development and deployment of Java applications based on a multi-tier, distributed object architecture.

The Java Platform (I)

- Java Virtual Machine
 - ◆ A platform-independent, abstract computing machine and execution environment, fundamental to the Java platform architecture
- Compiler
 - ◆ A tool used to build Java byte code from Java language source
- Debugger
 - ◆ A tool used to troubleshoot Java software components during development

The Java Platform (II)

- Browser

- ◆ Browsers such as Internet Explorer and Netscape Navigator are widely used across the enterprise. Java Plug-in enables browser users to view full-featured applets in Windows and Solaris-based browsers

- Java Plug-in

- ◆ A plug-in that enables common browsers to run full-featured Java 2 software-based applets, especially designed for intranet web pages and the enterprise

The Rest...

- Java Transaction Service (JTS)
- Java Transaction API (JTA)
- Java Messaging Service (JMS)
- Java Management API (JMAPI)
- Java Commerce API (Java Wallet)
- JavaSpaces
- Java Speech API
- Java Sound API
- Java Communications API
- Java Card
- Java Chips
- JavaOS
- Embedded Java, Personal Java
- Jini Technology
- ...