



JSYS - Version: 1
22 September 2021

Java System for non programmers



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 **2 days Course**

Description:

Many workers from the IT world and from software development run java applications and don't know java at all, many of them don't know how to write code. However, even if you are not programmer, sometimes it's very important to know what is the problem in the application, how to tune it properly and why the application performance is bad. This course will provide you all the information you need to detect problems and fix them without touching the code.

Intended audience:

Customer support, IT operations, QA, system administrators

Prerequisites:

None

Objectives:

- The student will understand the java architecture
- The student will understand the java compilation products
- The student will know how to monitor and tune java applications

Topics:

Introduction to Java

- History
- Key Features
- Java platform independence
- Byte Code

- JVM
- Java API
- Java memory model
- Garbage collector
- J2EE introduction

Java compilation

- Javac
- What is Jar
- Manifest.mf
- Java class path
- Java compilation tools
 - Ant
 - Maven

Inside the java virtual machine

- Java introduction
- JVM overview
- Java flow
 - Compiling Java
 - Linking Java
 - Running Java
- Understanding bytecode
- Java profiling

Class loaders and security

- Class Loader
 - Class Loader overview
 - Class loader & namespace
- Security Manager
 - Security and class loaders
 - Grant Policy file
- JCE

° Cryptography in Java

° Jar sign

JMX

- Overview of the JMX Technology
- Introducing MBeans
- Notifications
- Remote Management

Java profiling

- Profile java with yourKit
- Analyze Heap Dump
- Analyze Thread Dump

JVM tuning

- Garbage collection tuning
- Stack tuning
- Memory tuning
- Assertion