# Java System for non programmers

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JSYS - Version: 1

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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 proparely and why the application preformance 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
    - º Ant
    - º Maven

## Inside the java virtual machine

- Java introduction
- JVM overview
- Java flow
    - º Compiling Java
    - º Linking Java
    - º Running Java

- Understanding bytecode
- Java profiling

## Class loaders and security

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