



elttam

Secure Programming in Java™

demo dayz

Today's Agenda





















Time	Topic
3 mins	What is this? Who is this guy?
10 mins	Introduction to SPIJ
10 mins	Modules overview
15 mins	Lab demo
2 mins	Student testimonials
2 mins	Other courses by elttam
	Q&A

#/> whoami

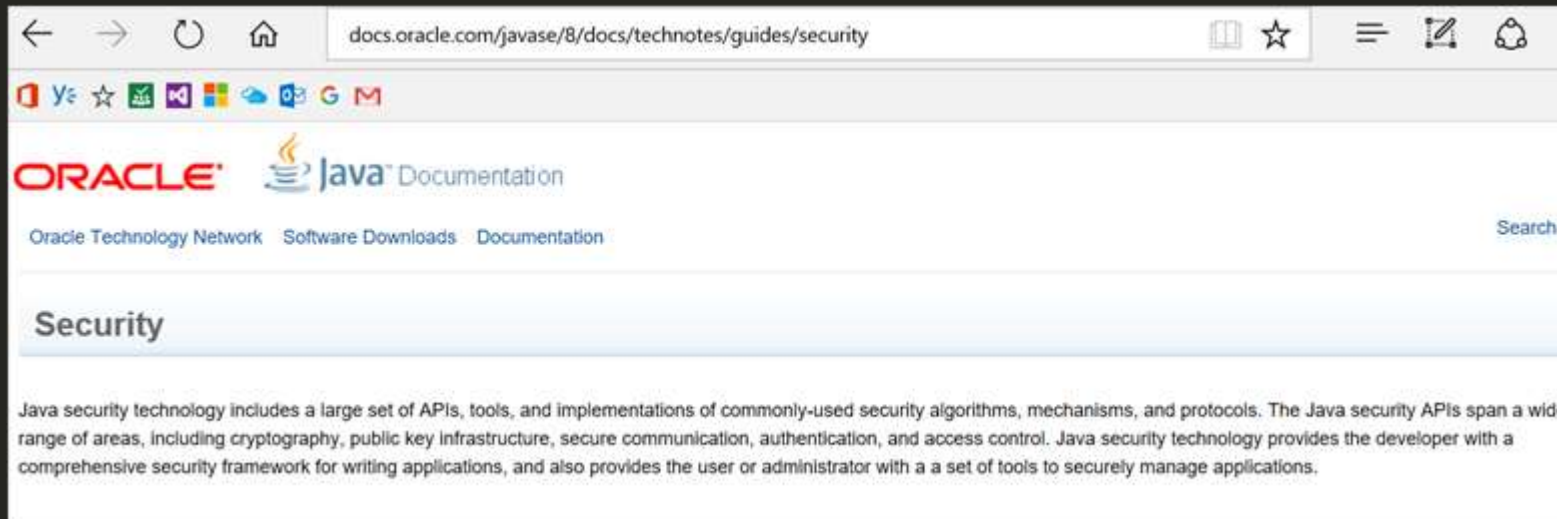
- Daniel Hodson
- Partner at elttam
- 0b10000 years in offensive security
- Love reading code



Java

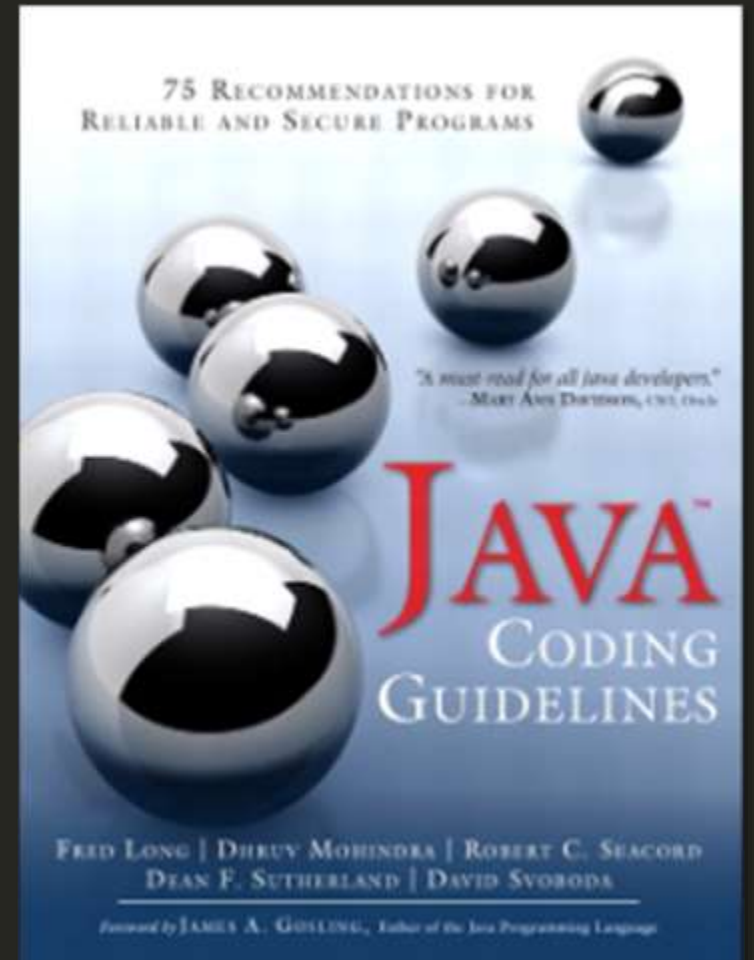
Language Rank	Types	Spectrum Ranking
1. Java	  	98.1
2. Python	 	97.9
3. C#	  	86.4
4. PHP		82.4
5. JavaScript	 	81.9
6. Ruby	 	73.8
7. Go	 	70.9
8. Scala	 	66.3
9. HTML		66.0
10. Perl	 	58.4

Security resources..



The screenshot shows a web browser window with the address bar containing `docs.oracle.com/javase/8/docs/technotes/guides/security`. The page header includes the Oracle logo and "Java Documentation". Below the header, there are navigation links for "Oracle Technology Network", "Software Downloads", and "Documentation", along with a search bar. The main content area is titled "Security" and contains a paragraph of text:

Java security technology includes a large set of APIs, tools, and implementations of commonly-used security algorithms, mechanisms, and protocols. The Java security APIs span a wide range of areas, including cryptography, public key infrastructure, secure communication, authentication, and access control. Java security technology provides the developer with a comprehensive security framework for writing applications, and also provides the user or administrator with a set of tools to securely manage applications.



We can do better!

Secure Programming in Java

“Not hearing is not as good as hearing, hearing is not as good as seeing, seeing is not as good as knowing, knowing is not as good as acting; true learning continues until it is put into action.” – Xunzi

Prerequisites



The Java® Language Specification *Java SE 8 Edition*

James Gosling
Bill Joy
Guy Steele
Gilad Bracha
Alex Buckley

2015-02-13

Students will wear two hats..



Attacker:

Finding vulnerabilities

Writing exploits

Defender:

Learning from attacks

Fixing vulnerabilities

And over two half days learn about..

- Java “Language Specific” vulnerabilities
- Web vulnerabilities as of 2017
- Programming within the Secure Software Development Lifecycle

Using a custom lab environment..

Screenshot of a web browser showing a "New Students" enrollment form. The browser address bar shows "localhost:8080/user/students/enrol". The page has a navigation bar with "Secure Programming in Java", "Login", and "Students". A green message box says "Successfully created new user account: dan". Below it, a text prompt says "Please fill out the form below to enlist in the SPIJ course." The form has fields for Username, Email, Password, and a bio field, followed by a Submit button.

Secure Programming in Java Login Students

New Students

Successfully created new user account: dan

Please fill out the form below to enlist in the SPIJ course.

	Username
	Email
	Password
	Write bio here...

Submit

© 2015-17 elttam Pty Ltd.

And get to will walk away with:

- Course material
 - Code
 - Docs
 - Handbook
- Class Metrics
- Feedback
- Training Certificate

Lab 0: House vs. Apartment

9 Responses

04:51
Average time to complete

[Review answers](#) [Post scores](#)

1. What things could be most worrying for the apartment?

Concern	Count
Malicious landlord during inspect	6
Intruder breaks into apartment or	6
Bypasser breaks into outside letter	6
Physical damage to high value as	5
Burgler breaks in through entranc	4
Hacker gains access to IP via inse	3
Visitor introduces malware onto t	2

TRAINING CERTIFICATE

Secure Programming in Java

Completed by:
John Smith

Completed on:
07 July 2017

Trainer:
Daniel Hodson

Modules overview

Hello World

- Checking out code
- Getting software dependencies installed
- Ensuring a working build environment for the day

Language Specific

- Primitive Numeric Data Types
- Denial of Service
- Serialization
- Cryptography

Generic Web

- Access Control
- Resource Handling
- Injection
- Output Encoding

Secure SDLC

- Threat Modelling
- Static and Dynamic Analysis
- Dependency Management
- Vulnerability Management

Labs demo

Student Testimonials

“Loved the structure (example > theory > lab). Was really helpful and engaging. The real-world examples were really helpful for seeing the great relevance of the material. Loved the unit testing approach to secure programming. Made it really easy to follow along and do the work.”

“Thanks! I really enjoyed the labs. In particular, the “fix it” test driven approach is a pragmatic way to understand and learn how to mitigate vulnerabilities. The content available as a git repo is also great.”

“Daniel was very approachable and hands on during the presentation. Always willing to help. The pace was perfect for learning.”

WHY DO WHALES JUMP
WHY ARE WITCHES GREEN
WHY ARE THERE MIRRORS ABOVE BEDS
WHY DO I SAY UH
WHY IS SEA SALT BETTER
WHY ARE THERE TREES IN THE MIDDLE OF FIELDS
WHY IS THERE NOT A POKEMON MMO
WHY IS THERE LAUGHING IN TV SHOWS
WHY ARE THERE DOORS ON THE FREEWAY
WHY ARE THERE SO MANY SNOOGSTEEK RUNNING
WHY AREN'T THERE ANY COUNTRIES IN ANTARCTICA
WHY ARE THERE SCARY SOUNDS IN MINECRAFT
WHY IS THERE KICKING IN MY STOMACH
WHY ARE THERE TWO SLASHES AFTER HTTP
WHY ARE THERE CELEBRITIES
WHY DO SNAKES EXIST
WHY DO OYSTERS HAVE PEARLS
WHY ARE DUCKS CALLED DUCKS
WHY DO THEY CALL IT THE CLAP
WHY ARE KYLE AND CARTMAN FRIENDS
WHY IS THERE AN ARROW ON AANG'S HEAD
WHY ARE TEXT MESSAGES BLUE
WHY ARE THERE MUSTACHES ON CLOTHES
WHY ARE THERE MUSTACHES ON CARS
WHY ARE THERE MUSTACHES EVERYWHERE
WHY ARE THERE SO MANY BIRDS IN OHIO
WHY IS THERE SO MUCH RAIN IN OHIO
WHY IS OHIO WEATHER SO WEIRD
WHY ARE THERE MALE AND FEMALE BIKES
WHY ARE THERE BRIDESMAIDS
WHY DO DYING PEOPLE REACH UP
WHY AREN'T THEIR UNKLES FATTERS
WHY ARE OLD KINGDOMS DIFFERENT
WHY ARE THERE SQUIRRELS
WHY IS PROGRAMMING SO HARD
WHY IS THERE A D OHY REBROK
WHY DO AMERICANS HATE GUYZER
WHY DO RHYMES SOUND GOOD
WHY DO TREES DIE
WHY IS THERE NO SOUND ON CNN
WHY AREN'T POKEMON REAL
WHY AREN'T BULLETS SHARP
WHY DO DREAMS SEEM SO REAL

WHY DO TESTICLES MOVE
WHY ARE THERE PSYCHICS
WHY ARE HATS SO EXPENSIVE
WHY IS THERE COFFEE IN MY SHARPOO
WHY DO YOUR BOOBS HURT

WHY ARE THERE SLAVES IN THE BIBLE
WHY DO TWINS HAVE DIFFERENT FINGERPRINTS
WHY ARE AMERICANS AFRAID OF DRAGONS
WHY IS HTTPS CROSSED OUT IN RED
WHY IS THERE A LINE THROUGH HTTPS
WHY IS THERE A RED LINE THROUGH HTTPS ON FACEBOOK
WHY IS HTTPS IMPORTANT
WHY AREN'T MY ARMS GROWING

QUESTIONS
FOUND IN GOOGLE AUTOCOMLETE

WHY AREN'T ECONOMISTS RICH
WHY DO AMERICANS CALL IT SOCCER
WHY ARE MY EARS RINGING
WHY ARE THERE SO MANY AVENGERS
WHY ARE THE AVENGERS FIGHTING THE X MEN
WHY IS WOLVERINE NOT IN THE AVENGERS

WHY ARE THERE ANTS IN MY LAPTOP
WHY IS EARTH TILTED
WHY IS SPACE BLACK
WHY IS OUTER SPACE SO COLD
WHY ARE THERE PYRAMIDS ON THE MOON
WHY IS NASA SHUTTING DOWN

WHY ARE THERE GHOSTS
WHY IS THERE AN OWL IN MY BACKYARD
WHY IS THERE AN OWL OUTSIDE MY WINDOW
WHY IS THERE AN OWL ON THE DOLLAR BILL
WHY DO OWLS ATTACK PEOPLE
WHY ARE AK 47s SO EXPENSIVE
WHY ARE THERE HELICOPTERS CIRCLING MY HOUSE
WHY ARE THERE GODS
WHY ARE THERE TWO SPOOKS





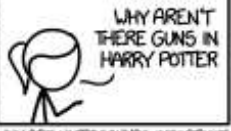
WHY IS MT VESUVIUS THERE
WHY DO THEY SAY T MINUS
WHY ARE THERE OBELISKS
WHY ARE WRESTLERS ALWAYS WET
WHY ARE OCEANS BECOMING MORE ACIDIC
WHY IS ARWEN DYING
WHY AREN'T MY QUAIL LAYING EGGS
WHY AREN'T MY QUAIL EGGS HATCHING
WHY AREN'T THERE ANY FOREIGN MILITARY BASES IN AMERICA

WHY ARE THERE TINY SPIDERS IN MY HOUSE
WHY DO SPIDERS COME INSIDE
WHY ARE THERE HUGE SPIDERS IN MY HOUSE
WHY ARE THERE LOTS OF SPIDERS IN MY HOUSE
WHY ARE THERE SPIDERS IN MY ROOM
WHY ARE THERE SO MANY SPIDERS IN MY ROOM
WHY DO SPIDER BITES ITCH
WHY IS DYING SO SCARY
WHY IS THERE NO GPS IN LAPTOPS
WHY DO KNEES CLICK
WHY AREN'T THERE E GRADES
WHY IS ISOLATION BAD
WHY DO BOYS LIKE ME
WHY DON'T BOYS LIKE ME
WHY IS THERE ALWAYS A JAVA UPDATE
WHY ARE THERE RED DOTS ON MY THIGHS
WHY IS LYING GOOD

WHY ARE THERE FEMALE MR NIMES
WHY IS LIFE SO BORING
WHY AREN'T THERE GUNS IN HARRY POTTER
WHY ARE ULTRASOUNDS IMPORTANT
WHY ARE ULTRASOUND PROBED EXPENSIVE
WHY IS STEALING WRONG

WHY ARE THERE MIRRORS ABOVE BEDS
WHY DO I FEEL DIZZY

WHY ARE DOGS AFRAID OF FIREWORKS
WHY IS THERE NO KING IN ENGLAND

Thanks!



<https://www.elttam.com.au>
hello@elttam.com.au

Phone: +61 (02) 8004 5952
20-40 Meagher Street
Chippendale, NSW
Australia



Copyright © 2017-2019 by elttam Pty Limited (ABN 20 605 531 502).

All rights reserved. No part of this document may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of elttam.

elttam, elttam logo are trademark of elttam Pty Ltd. Other brands and products are trademarks of their respective owner(s).