Handle The Billion-Dollar Mistake In Java

Help tools understand your code

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Agenda

• Null – a billion-dollar mistake?
• @NonNull, @Nullable... @WTF?
• Tooling
• Alternatives
The null concept: a billion-dollar mistake?

His creator, Sir Charles Antony Richard Hoare, says yes! :-)

[…] languages designs is serious scientific engineering activity. And we should begin to take responsibility for the mistakes our users make in the use of our languages.

– Tony Hoare
Unexpected...
JSR305 : Annotations for software detections

Why @Nonnull... annotations?
« they express design decisions that may be implicit, or described in documentation, but not easily available to tools »
LET'S DO THIS

Code talks, slides walks...
References

• Null References: The Billion Dollar Mistake
  • http://www.infoq.com/presentations/Null-References-The-Billion-Dollar-Mistake-Tony-Hoare

• Eclipse Help For Using Null Analysis
  • http://eclip.se/2f

• JSR 308: Annotations on Java Types
  • https://www.jcp.org/en/jsr/detail?id=308

• To go further: the Checker Framework
  • http://types.cs.washington.edu/checker-framework/

• Experiment: runtime report of non-compliant calls (WIP)
  • https://github.com/Batmat/jsr305reporter