Test Driven Development

with JUnit and Fittness

Lukas Rypl

TTC MARCONI
Czech Republic

Twitter: @LukasRypl

for BarCamp Saigon

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Target Audience

- Java developers
- Programmers in any other language
- Their team leaders
- Testers

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Profesionals who

- feel safer
- sleep better
- validate their work

Agenda

- Intro - what and why
- Simple project with JUnit
- Adding Fitness
- Advanced topics

Our simple project

Everybody is talking about BarCamp.

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- Bar Camp Saigon
- barcamp
- BarCamp Saigon 2012
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- . . .

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Task: is it a valid name?

Developers Work Algorithm

Test Driven Development

```
while (task.requiresWork())
{
  1. Write a failing unit test
  2. Write implementation
}
```

Why Unit Testing

- make sure that foundations are OK
- create better (extensible) design
- think about edge cases

Tools

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- JUnit (unit testing library) www.junit.org

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Why another tool?

- acessibe to non-programers
- examples can be created during analysis
- may overlap with junit / preventing duplication?

Unit Testing Books

- Kent Beck:
  Test Driven Development by Example (2002)
- Martin Fowler:
  Refactoring: Improving the Design of Existing
  Code (1999)
- Michael E. Faethers:
  Working Effectively with Legacy Code (2004)

Advanced Topics

- dealing with dependencies (mocks, stubs)

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- running tests automatically
- acceptance tests driven development (ATDD), specification by example (cucumber)
- when unit tests do not pay off?