

9/9

0800 Antcom started
 1000 " stopped - antcom ✓ { 1.2700
 1300 (032) MP-MC 1.98260000
 (033) PRO 2 2.13047645
 correct 2.13067645
 Relays 6-2 in 033 failed signal
 in relay 12.000 +

1100 Started Cosine Tapc (Sine check)
 1525 Started Multy Adder Test.

1545



Relay #70 Panel F
 (moth) in relay.

First actual case of bug being found.
 1630 Antcom started.
 1700 closed down.



ISO/IEC 25010 Software Quality

Functional suitability

Compatibility

Performance efficiency

Usability

Reliability

Security

Maintainability

Portability

Software Requirement

1. A condition or capability needed by a user to solve a problem or achieve an objective.
2. A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document.
3. A documented representation of a condition or capability as in 1 or 2.

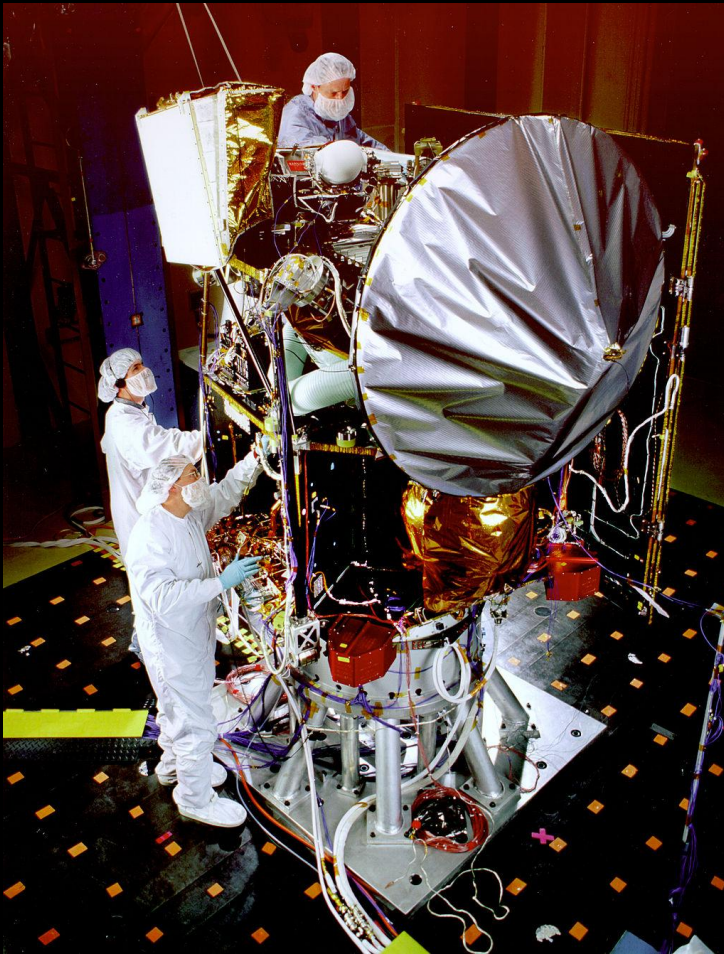



ISO/IEC 9126 BUG

Defect: "The nonfulfilment of intended usage requirements"

Nonconformity: "The nonfulfilment of specified requirements".

Hmmm



 **The Making of a Fly: The Genetics of Animal Design (Paperback)**
by Peter A. Lawrence

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Agile & Requirements

Individuals and interactions over
processes and tools

Working software over
comprehensive documentation

Customer collaboration over
contract negotiation

Responding to change over
following a plan

TESTING

Verification

Are we building the software right?

Static

Inspect

- Loop conditions

- Indices

- Names

- Types

- Argument order

Validation

Are we building the right software?

Dynamic

Build & Run

Test-to-pass / Test-to-fail

White / Grey / Black

Automatic / Manual



WHAT test

HOW test that?

WHY test?

Testing

Unit testing

System / Integration testing

Acceptance testing



Files Services

JavaXpath

Midterm7343

Source Packages

<default package>

agileJUnit

MyAgileTest.java

Test1.java

deadlock

midterm7343

regex

RegexTest1Strings.java

RegexTest2StringMa

RegexTest3BGroupsE

RegexTest3GroupsBz

RegexTest3PatternM

RegexTest5Greedy.j

Test Packages

Libraries

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!!!

...ava RegexTest3BGroupsBackref.java Test1.java Test1Test.java MyAgileTest.java MyAgileTestTest.java

```
37     }
38
39     /**
40      * Test of add method, of class MyAgileTest.
41      */
42     @Test
43     public void testAdd() {
44         System.out.println("add");
45         String s1 = "2";
46         String s2 = "2";
47         MyAgileTest instance = new MyAgileTest();
48         int expResult = 4;
49         int result = instance.add(s1, s2);
50         assertEquals(expResult, result);
51     }
52 }
53
```

Mid - Navigator

s View

MyAgileTestTest

MyAgileTestTest()

setUp()

setUpClass()

tearDown()

tearDownClass()

testAdd()

Test Results

Output - Midterm7343 (test)

Tasks

agileJUnit.Test1Test x

agileJUnit.MyAgileTestTest x

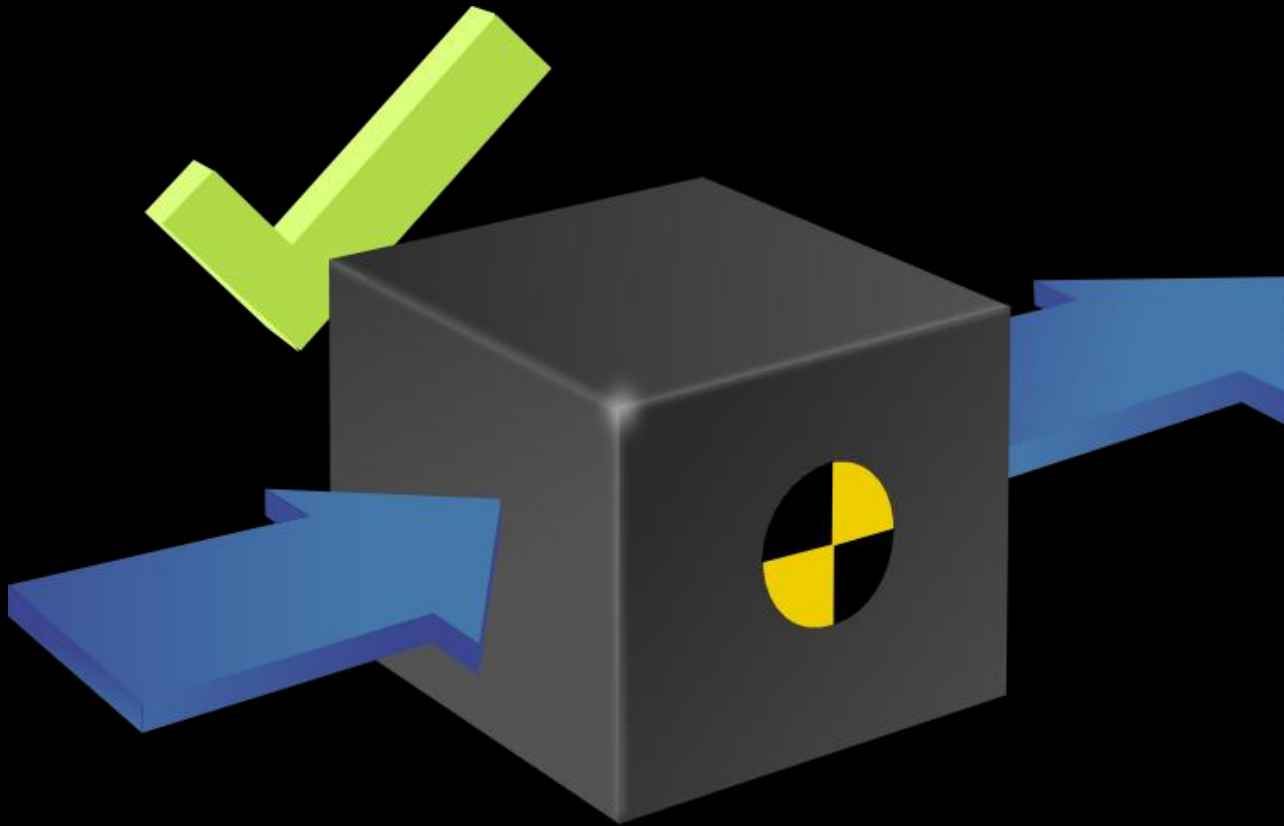
100.00.0%

add

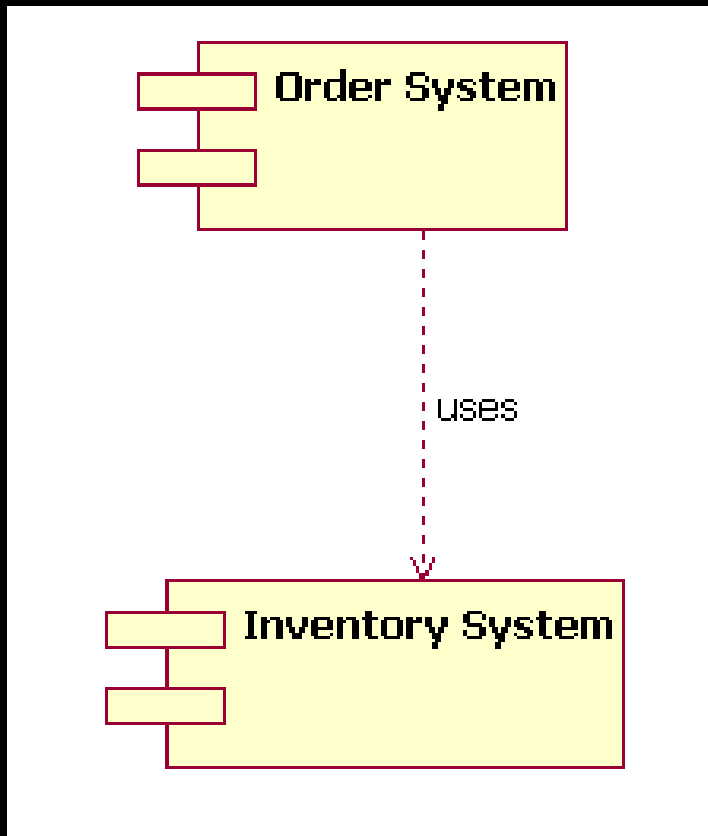
The test passed.(0.059 s)

agileJUnit.MyAgileTestTest passed

System testing



Integration testing



Will Order System and Inventory System behave in an erroneous or unexpected way when working together?

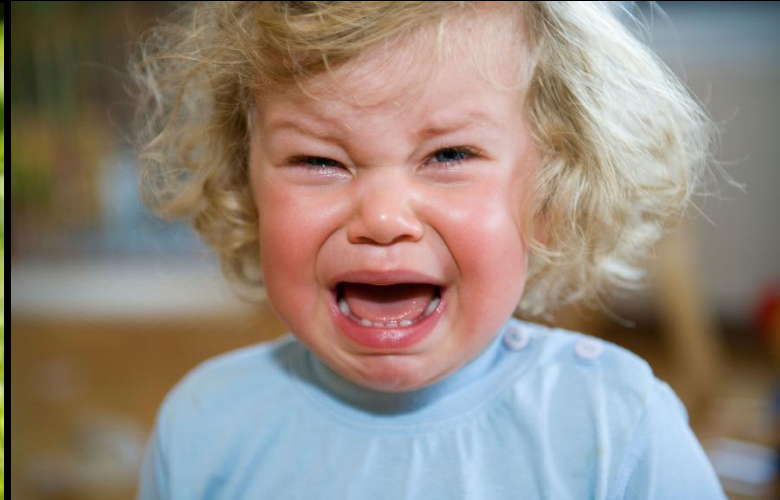
Acceptance Test

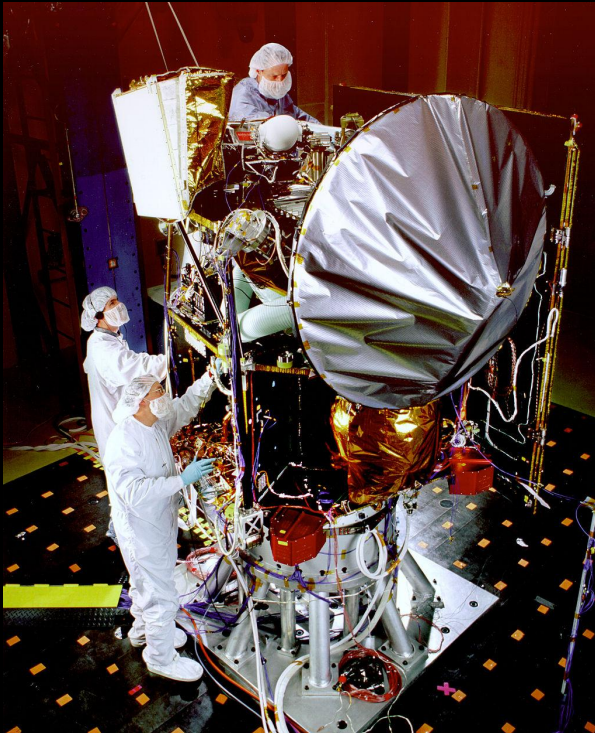
USER EXPERIENCE

A / B TESTS

MULTI-VARIATE

BETA-RELEASE





Google

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REMEMBER

THE SPECIFICATIONS WILL CHANGE OVER TIME

IT'S IMPOSSIBLE TO COMPLETELY TEST A PROGRAM

TESTING CAN'T SHOW THAT A PROGRAM IS BUG-FREE

ALL FOUND BUGS CAN'T BE FIXED

DIFFICULT TO DECIDE IF IT'S A BUG OR NOT

Agile & Testing

Acceptance criteria

DoD

Customer collaboration over...



Continuous integration

Continuous deployment

Test-driven development

...

TEST-DRIVEN DEVELOPMENT

ADD A NEW TEST

RUN ALL TESTS

ADD SOME CODE

RUN ALL TESTS

REFACTOR

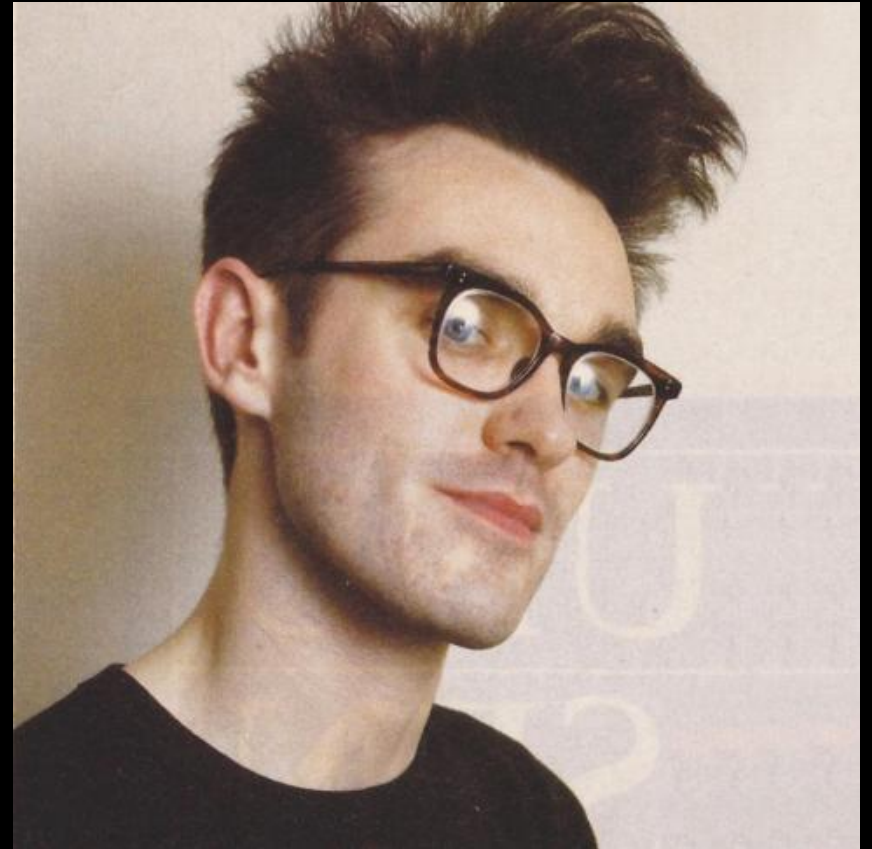
RISKS & MITIGATION STRATEGIES

Business

Technical

Feedback

Organisational



SOME ADVICE

MERGE-MERGE-MERGE

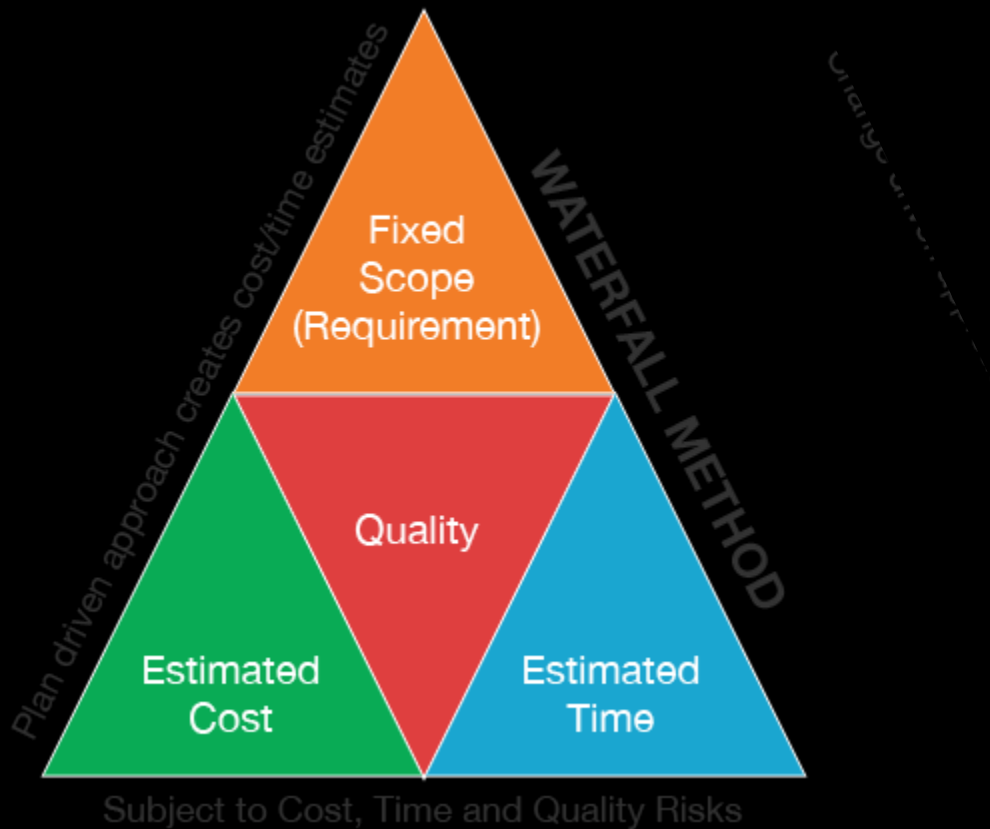
CHALLENGE YOUR ASSUMPTIONS

SELF-ORGANISATION & RESPONSIBILITY

USE ME AND JAN-PHILIPP AS COACHES

THE P.O. ≠ THE GRADER

PROJECT TRIANGLE



Even More Advice

“It’s not the plan that is important,
it is the act of planning”

G. Edwards

“I’m not planning to jump off a bridge with no
bungee”

Norah Jones

REALITY CHECK

What was purpose of lecture?

Which learning objectives were covered? How?

What was the relationship to the course assessment?

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