Lab 1: Jan 17, 2013

Food for thought:

Dr. Peng Ning's research is in Cybersecurity, and one of the topics he focuses on is using virtual environments for security purposes.

How could you write a program that would know if it was running on a virtual or real machine?

Your team assignment has been announced in Moodle. Please sit with your partner and start iTrust.

Agenda (best guess)

Meet your Partner	5 minutes
Testing Discussion	10 minutes
Bug Hunt	55 minutes
Trading Test Plans	30 minutes
Homework 2 pt 2	10 minutes

I'll give you 5 minutes to start iTrust in your group. You can share a laptop/desktop during the lab.

Let's Talk about Part 1

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It was hard and overwhelming? That's what this class is like.

Documentation is always out-of-date. You need to know where to look and who to ask for help.

Nobody knows all the answers. This includes the TA.

How Homework Assignments Work

All HW assignments are divided into two parts

Part 1: Testing and planning

You have to write your Black Box Tests, create test data in SQL, and so on.

The course staff will then look at them and give you feedback for...

Part 2: Coding

Test Plans

Today's theme is about TESTING

HW2 part 2 will be due in 2 weeks, on Jan 30

Think of this week as HW2 part 1/2: the testing phase.

What is wrong with this test plan?

TestID	Steps	Expect Results
Test1	HCP logs in and clicks "Create new patient" HCP Enters a name and some demographic information	The patient doesn't get created because there is a bug.
Test2	Precondition: There are 3 patients in the DB HCP logs in and clicks "view report"	There should be as many rows as patients in the DB.
Test3	HCP logs in and schedules an appointment with Baby Programmer.	The appointment appears in the HCP's list of appointments and also in Baby Programmer's list.

What makes a good test plan

Repeatable

Specific

Focused

Difference between Test and JUnit

When we ask for tests, many times, people think we mean "JUnit tests".

A test is just a test, written in english, that a person could follow to verify the program. These will go in your Black Box Test Plan.

A JUnit test is actually written in Java.

Now you do it!

Look at the requirements for UC1, 18, and 46.

Think of tests you could make to test those requirements.

Try them out. Do your own tests pass or fail?

Try to find bugs in these 3 use cases. If you find one, write up a test that will fail (because of the bug). You will submit these before leaving.

Trade Test Plans

Now trade your test plans with another team.

On your version of iTrust, run through the tests. Do they pass? Do they fail? What's the bug?

What about test data?

Do you need to create new patients for these tests?

How do you automate this?

Common Mistakes

- Don't change the DefaultTestData or you'll risk breaking the old tests.
- When making tests, literal numbers are better than evaluated numbers (if you put "logic" in your tests, you'd have to test your tests too!)
- Don't forget that the Actual Results column must always be present and always be empty!

Next Time

We're going to look at your test plans and start fixing the bugs.

You have two weeks until HW2 part 2 is due. Use that time wisely. Your test plan and data must be ready by next Thursday.