TESTING CODE FROM THE PIT OF DESPAIR

Philip Japikse (@skimedic)
skimedic@outlook.com
www.skimedic.com/blog
Microsoft MVP, ASPInsider, MCSD, MCDBA, CSM, CSP
Consultant, Teacher, Writer
Phil.About()

➢ Consultant, Coach, Author, Teacher
➢ Microsoft MVP, ASPInder, MCSD, MCDBA, CSM, CSP
➢ Founder, Agile Conferences, Inc.
  ➢ http://www.dayofagile.org
➢ President, Cincinnati .NET User’s Group
LEGACY CODE

➢ Any Code Not Under Test
   – Michael Feathers
➢ High Technical Debt
➢ Icky

http://www.sxc.hu/photo/1024076
WHEN TO CHANGE SOFTWARE

- Killing Bugs
- Adding Features
- Optimizing Resources
- Pay down Technical Debt
- Removing FUD*
MAKE ONE CHANGE AT A TIME

- Fix or Add
- Test after every change
- Commit after every test
TOOLS OF THE TRADE

➢ TDD
➢ BDD
➢ Mocking
➢ Dependency Inversion
➢ UI Testing
TEST DRIVEN DEVELOPMENT
BEHAVIOR DRIVEN DEVELOPMENT
**FAKES, STUBS, AND MOCKS**

- Fakes have working implementations
- Hardcoded, not suitable for production
- Stubs provide canned answers
- Mocks pre-programmed with expectations
  - Create a specification
  - Record behavior
DEPENDENCY INVERSION
USER INTERFACE TESTING

- Typically Manual
- Often tested by customers
- Tools becoming better
TESTING AND REFACTORYING
SAFETY FIRST!

➢ Remember: Only you can prevent bugs!
“INTEGRATION” TEST

http://icanhascheezburger.com/2008/10/22/funny-pictures-safety-blanket-ai-has-one/
CODE ISOLATION AND REFACTORING

10: FindChangePoint()
20: CreateASeam()
30: AddNewTest()
40: Refactor()
50: If !Isolated GOTO 20
60: FixTargetIssue()
70: HappyHour()
CREATE A SEAM

- Dependency Injection
- Commercial Mocking
ADD A TEST

➢ TED Style
REFACTOR

- Extract Methods
- Reduce Complexity
- DRY
- SOLID
LATHER, RINSE, REPEAT

➢ Continue to drill down
ENTER THE DRAGON

- Code is isolated
- Tests are in place
- Switch to T/BDD
TEST/BEHAVIOR DRIVEN DEVELOPMENT

- Write a failing test
- Make the test pass
- Refactor
  - Remove magic code
  - Add use cases
➢ Wave to your coworkers as they struggle with their legacy code…
Me.Contact() skimeddic@outlook.com www.skimeddic.com/blog www.twitter.com/skimedic

www.hallwayconversations.com

Questions?