Introduction

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The Problem

- Most security problems are caused by bad code
- Bad code is caused by students not being taught how to write good code
  - Most programming textbooks have no security content
  - Many programming textbooks actually teach insecure programming practices and/or use vulnerable code in their examples
- Instructors have to teach what is in the textbooks
  - Most programming instructors are not security experts
  - Instructors are evaluated on how closely they follow the textbooks in a course
Hack the Textbook

Fixing It

• Industry View
  • Students should be taught good software development practices in school
  • Tired of having to retrain new graduates

• Academic View
  • Not a real issue
    • Publishers would be pressuring authors to change their textbooks if there was a real need
    • Students should be learning theory, not application
  • No resources
    • Not every instructor is a security expert
    • Not enough class time to add material to courses
The Project

- The Textbook Security Project:

TTBSP.ORG

HackTheTextbook.org
The Project

- **Immediate Goals:**
  - Publicly expose security flaws in popular textbooks
  - Encourage authors to use secure software development practices in their textbooks
    - Revise existing textbooks
    - Get it right the first time in new textbooks
The Project

• Long Term Objectives
  • To make secure software development practices the standard way programming is taught
  • To make security an integral part of every computer science course
  • To become a resource that textbook authors and classroom instructors can use to stay up-to-date on the latest software security issues
How You Can Help!

**Everyone:**
- Identify textbooks and courses using them
- Review textbooks
- Edit reviews
- Link to site
- Link to reviews
- Contribute best practices white papers
- Help local universities to understand their impact on software security

**Publishers:**
- Contribute books for review
- Contribute funding to support the project
How You Can Help!

- **Users:**
  - Everyone
    - View all technical content
  - Semi-Anonymous Submitter
    - Requires email address for submission verification
    - Identity never publicly disclosed
    - Can use the following features:
      - Submit books for review
      - Submit courses using books
      - Comment on reviews
How You Can Help!

- **Users:**
  - Registered User
    - Basic Registration Information:
      - Real name and handle
      - Basic contact information, including email address
      - Affiliation: School, company, etc.
      - Email address verifies registration
    - Only handle publicly disclosed
    - Can use the following features:
      - Submit books for review
      - Submit courses using books
      - Comment on reviews
Hack the Textbook

How You Can Help!

- **Users:**
  - **Reviewers**
    - Requires registration:
      - Basic registration information
      - Brief bio
    - Handle or real name is publicly disclosed
    - Bio is viewable by confirmed authors and publishers whose books you have reviewed
  - Can use the following features:
    - All registered user features
    - Review textbooks
    - Contribute white papers
How You Can Help!

• Users:

• Editors
  • Requires registration:
    • Basic registration information
    • Brief bio
    • Demonstrated technical editing experience
  • Invisible to everyone except reviewers and staff
  • Can use the following features:
    • All reviewer features
    • Edit site content (coordinated with content providers)
How You Can Help!

- **Users:**
- **Author / Publisher:**
  - Requires registration:
    - Basic registration information
    - Requires direct contact information
  - Invisible to everyone except reviewers and staff
  - Can use the following features:
    - All registered user features
    - View bios of reviewers of your textbooks
    - Request reviewers contact them
How You Can Help!

- Notes on workflow:
  - Most content will not be made public until reviewed and approved.
  - Exceptions:
    - Book submissions
    - Course submissions
  - Users not logged in will be required to provide an email address to which a confirmation link will be sent. Link must be clicked on before content is made public.
  - Editors may contact reviewers and request possible changes to make reviews clearer, etc.
  - Authors and publishers may request that you contact them regarding your reviews.
How You Can Help!

Please keep it professional!!

Stick to the facts!!
DEMONSTRATION

Summary

- The key to fixing our security problems is to fix our code problems
- The key to fixing our code problems is to teach programmers to write good code
- The key to teaching programmers to write good code is to use textbooks that teach secure software development practices
- We need your help to make this happen!
One final request...

Please do not pwn us!
Questions?
Thank You!

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http://www.ttbsp.org/
http://www.hackthetextbook.org/

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