IntroSSOC Course overview

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CSE467 IntroSSOC

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Agenda

- Course related: objectives, topics, teaching mode.

- Assignment and exam related information.

- Grading scheme.

- Warm-up activity.

Outline

Course objective

- Introduce cryptography and system security from an offensive perspective.

- Topics are widely relevant today in industry and also encompass today's prominent research areas.

- Less theory, more hands-on activities(which reinforce theory).

- Why this approach? Existing research shows offensive teaching style improves learning and retention.

What you will learn?

- Writing low level code: Lower than C!

- Reverse engineering binaries.

- Identifying vulnerabilities in system programs and exploiting them.

- Identifying incorrect use of cryptographic algorithms and exploiting them.

Why learn these topics?

- **Staying relevant**: Insecure code and incorrect use of cryptography by developers among top vulnerabilities in today's world!

- Information security jobs and research are heavily being stressed upon by government and private organizations.

- Foundation for developing advanced skills and learning more.

- Intellectually challenging.

Teaching mode

- Less lecturing, more hands-on activities in class.

- So bring your laptops, chargers, power strips and internet.

- Recommended OS: Ubuntu 14.04 and up. Preferably an LTS version.

- Practical assignments from topics discussed in class.

Outline

Examination related information

- Computer-based test and not traditional pen-and-paper based test.

- Mix of theory and practical questions for exam.

- We will schedule and not academic cell.

- You will have to submit solutions electronically as per requirements of question.

Assignments

- 5 hands-on assignments which test topics discussed in class.

- Individual assignments and not group assignments.

- Submission online through our autograding system only and nowhere else.

- Assignment related: maximum of 6 late days allowed with maximum 2 per assignment, unless explicitly specified for assignment.

Plagiarism policy

- We do not condone plagiarism. Just don't do it.

- If discovered, everyone involved get a 0 for that assignment.

- If repeated plagiarism occurs, we will report to your department and any/all of following
  - Assign 0 or less marks for past, current and/future assignments.
  - Assign 0 or less marks for exams.
  - Other creative penalties we think of during the semester.

- Bottomline: Just don't copy or lend your assignments to anyone.

Outline

Grading scheme

- **Periodical 1**: 15%.

- **Periodical 2**: 15%.

- **Assignments**: 20%.

- **Final exam**: 50%.

Outline

Assignment 0: Hello, World!

Objectives

- Introduce the auto-submission and auto-grading system.

- How to use the auto-grading system?

- How to submit assignments there?

- How to view your scores?

Assignment 0: Hello, World!(cont.)

- What to do: Write a program that prints "Hello, world!".

- More instructions will be uploaded in AUMS soon and an announcement will be posted.

- Please ensure you have specified an email ID in your AUMS profile to receive email alerts.

Questions?

If you have any questions,

- Ask now.

- Send an email - arvindsraj@am.amrita.edu.