Homework 1: Rational Paranoia

This homework is due Wednesday, January 20 at 6 p.m. and counts for 5% of your course grade. Late submissions will be penalized by 10% plus an additional 10% every 5 hours until received. Late work will not be accepted after 20.5 hours past the deadline. If you have a conflict due to travel, interviews, etc., please plan accordingly and turn in your homework early.

We encourage you to discuss the problems and your general approach with other students in the class. However, the answers you turn in must be your own original work, and you are bound by the Honor Code. Solutions must be submitted electronically via http://www.Gradescope.com in pdf format by completing the template on page 2 below. In order to submit to Gradescope, you must set up an account using your University of Michigan email address (i.e., uniquename@umich.edu). Once you have a Gradescope account, add EECS 388 as a course using the code MD35X9. You should now see the Homework 1 assignment submission link.

For each scenario below, imagine that you are in charge of security. Apply the security mindset to answer these questions:

- What assets are important for you to protect?
- What security threats will you choose to defend against?
- What countermeasures can you justify, in terms of costs and benefits?

Answer each of the above in the form of a bulleted list, with brief justifications or explanations as necessary. State any critical assumptions you decide to make. Your grade will be based on the thoroughness, realism, and thoughtfulness of your analysis.

1–2. Pick two of the following scenarios. (If you submit responses for more than two, you’ll receive the two lowest scores.)

   (a) You are managing the security of checked luggage at Detroit Metropolitan Airport.
   (b) You oversee the football stadium at a Big Ten school.
   (c) Your firm does background checks on prospective employees for the Federal government.
   (d) You are developing and deploying a self-checkout system for Target.
   (e) You manage a bug tracker for the developers of a popular web browser; some bug reports are about sensitive security issues.

3. Choose another scenario from everyday life that we haven’t discussed in class. Your choice may be directly related to computer security, but it doesn’t have to be.
Submission Template

# Problem 1

Scenario:
{Luggage|Stadium|Background|Target|Bugtrack}

Assumptions:
explain_your_assumptions

Assets:
- Asset - brief_explanation
- Asset - brief_explanation
...

Threats:
- Threat - brief_explanation
- Threat - brief_explanation
...

Countermeasures:
- Countermeasure - brief_justification
- Countermeasure - brief_justification
...

# Problem 2

(Use the same format as Problem 1 for a different scenario from the list.)

# Problem 3

Original Scenario:
explain_your_scenario_and_assumptions

Assets:
...

Threats:
...

Countermeasures:
...