

## Homework 1: Rational Paranoia

This homework is due **Thursday, January 17 at 6 p.m.** *Late submissions will not be accepted.* 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 GitHub. You will visit the following URL, creating a private repository with a template within. Edit the “README.md” file, commit, and push.

<https://classroom.github.com/a/rbAyvDRI>

Note that, since we’re still waiting on GitHub to give us the magic bit for unlimited, free private repos, your cloned repositories will actually be visible to the world for a few days. You’re just writing some essays, so no big deal. Before we start project 1, everything will be private.

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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. Your explanations for each part should be *approximately a paragraph in length*. The overall response should be no less than three pages and no more than 6 pages. 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 more, we'll grade the first two and ignore the others.)

- (a) You oversee the football stadium at a university whose team is frequently ranked among the best in the country.
- (b) As head of the TSA, you set the rules for screening passengers at airport checkpoints.
- (c) As head of IT for an international law firm, you are responsible for a document management system; some documents stored there are about sensitive legal, financial, or political matters.
- (d) You are grading homework submissions for a class of 200+ students.
- (e) You are overseeing the security for the G20 summit, inexplicably scheduled for Houston this July.

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.