



Scenarios

1 - 17

Do not use 1-3 for final paper

1: Webcams in School Laptops

As part of your responsibilities, you oversee the installation of software packages for large orders. A recent order of laptops for a local school district requires webcam software to be loaded. You know that this software allows for remote activation of the webcam. What do you do?

2: Publishing security vulnerabilities

3 CS students at MIT exploited security vulnerabilities in Boston's transit fare system that allowed them to manipulate the system to get free subway rides. They later organized the details of the exploit into a research presentation and registered to present it at a popular computer conference. At the request of the MBTA, a judge ordered the students to cancel the presentation and not to distribute their research. The students are debating whether they should circulate their paper on the Web.

3: Schedule pressures – safety critical

Your team is working on a computer-controlled device for treating cancerous tumors. The computer controls direction, intensity, and timing of a beam that destroys the tumor. Various delays have put the project behind schedule, and the deadline is approaching. There will not be time to complete all the planned testing. The system has been functioning properly in the routine treatment scenarios tested so far. You are the project manager, and you are considering whether to deliver the system on time, while continuing testing and making patches if the team finds bugs.

4: Rx

You are a programmer hired to code a quiz for a pharmaceutical company. The company is not permitted by law to advertise directly to teenagers, but since teens are the target demographic for a new medication, they have constructed a website with “informational” articles and quizzes to appeal to teenagers. You are directed to program a quiz about personality types (PTs) for the site. Regardless of the PT results, the final page should suggest the company’s medication as an ideal solution for problems with that PT.

5: Test plan

You and other programmers are developing a communications system in disaster zones (such as Manhattan on 9/11) for first responders. Users will be able to communicate with each other, with supervisors near the scene, and with other emergency personnel. The programmers plan to conduct the entirety of the testing for the system in a field near the company office.

6: Facial Recognition

You are part of a team developing a sophisticated program used in connection with a massive network of surveillance cameras in public places. Your program uses facial recognition technology to identify suspected criminals, then sends matching mug shot and location data to the nearest law enforcement officer (LEO). The LEO then uses the mug shot for identity confirmation before making an arrest.

7. Ready, Aim

You are part of a robotics team recently hired by the U.S. government to develop software for drones used in combat zones. Your software can identify and locate individuals who match descriptions of enemy combatants, and automatically aim a weapon mounted on the drone at the target, then wait for human input before firing. The U.S. government has requested an added feature: for the drone to automatically fire the weapon once it is properly aimed. You know that this is technically possible.

8: Specifications

A payday loan company has hired you to program software that will enable them to quickly set interest rates for their customers. Since variables including age, race, and criminal record have indicated loan risk in the past, they want to ensure your algorithm is ready to assign higher interest rates to people with 'unfavorable' information in those categories, among other inputs.

9: Pressure: Product to Markets

You are a programmer working for a very small start-up company. The company has a modest product line and is now developing a truly innovative new product (**pick one**). Everyone is working 60-hour weeks and the target release date is nine months away. The bulk of the programming and testing is done. You are about to begin the beta testing. The owner of the company (who is not a programmer) has learned about an annual industry show that would be ideal for introducing the new product. The show is in two months. The owner talks with the project manager. They decide to skip the beta testing and start making plans for an early release.

10: Software License Violation?

You work for a new startup with very limited funding. Your company wants a certain piece of design software in order to create advertisements for more funding, but the software is extremely expensive. You dig through dozens of online search results and eventually find several product keys for the software posted on a forum site. You consider impressing your boss by using the keys to set up the software on your work machines.

11: Selling info

You work as a programmer for Uber. Someone asks you to get a copy of records about a particular customer. He will pay you \$1,000. Your friend David, who works with you as a programmer, confides that he sells records with people's personal information to the same buyer. David assures you that nothing bad has happened.

12: Close connection

You work as a system administrator for a chain of businesses. Your boss asks you to hire a new help desk employee. Your brother mentions that his son, your nephew, really needs a summer job in order to add to his resume. He hasn't had a job in this field before, but you're sure you could sufficiently train him. There are 24 other applicants for the position.

13: Kickbacks

You are the head of the IT department at a major university. Your department selects a few brands of security software to recommend to students for their desktop computers, laptops, tablets, and other devices. One of the companies whose software you will evaluate takes you out to dinner, gives you free software (in addition to the security software), offers to pay your expenses to attend a professional conference on computer security, and offers to give the university a percentage of the price for every student who buys its security package. How do you proceed?

14: Censorship

You are a programmer for an immensely successful internet search engine company in the United States. The company is planning to expand operations to China, where a massive market awaits. The Chinese government has stated that they are interested in the search engine, but would require several changes to search results – changing or deleting some results that are deemed damaging to the government, and linking customers' search queries with their phone numbers. What do you do?

15: Damage Control

You work as an IT consultant for a state government. Recently, journalists have been hounding the governor, publishing articles that expose apparent corruption in his office. One journalist in particular has set up in front of the state house and refuses to leave until she has “all the facts.” The governor is upset and asks you if there’s anything you can do to find what the journalist is planning to publish. He gives you the journalist’s contact information and hints that she may be susceptible to a phishing attack if an email were to seemingly come from her son’s school.

16: Employee Check

You are the administrator for your company's email system. One employee, Sam, seems to have angered your boss, Krysta. Krysta asks you to send a copy of all Sam's outgoing mail to her account so she can monitor it and make sure Sam isn't breaking company policy.

17. Content Challenge

You are the administrator of a website that allows people to upload personal videos. Recently, users have been uploading videos of themselves dancing to a popular song. The record label that represents the song artist has emailed you, asking you to remove the videos in which the song can be heard, as well as to close offending users' accounts, since they clearly don't respect the rules.