

Fall, 2015

Name: _____

(Please *don't* write your id number!)

CIS 4615 — Secure Software Development and Assurance

Test on Threat Modeling

Special Directions for this Test

This test has 2 questions and pages numbered 1 through 5.

This test is open book and notes, but no electronics.

If you need more space, use the back of a page. Note when you do that on the front.

Before you begin, please take a moment to look over the entire test so that you can budget your time.

Clarity is important; if your answers are sloppy and hard to read, you may lose some points.

For Grading

Question:	1	2	Total
Points:	45	55	100
Score:			

1. [SecurelyConstruct] In this question you will do part of a threat analysis for a photo-sharing site, such as flickr.com. For our purposes, this site allows users to upload their digital photos through the internet to the site, and the site stores them. Although real photo-sharing sites have more functions (e.g., organizing photos and social networks), in this question you will just focus on the basic interaction of a user uploading photos to the site and at a later time retrieving them. Assume that there are a large number of users and that their photos take up a lot of disk space. We also assume that the users pay for the service of storing the photos that the site charges them for; however, you need not worry about the service's accounting and customer service functions for this question.
 - (a) (15 points) Draw a network model for such a photo-sharing site.

This page continues the photo-sharing question from the previous page.

(b) (15 points) Identify all the assets of such a photo-sharing site.

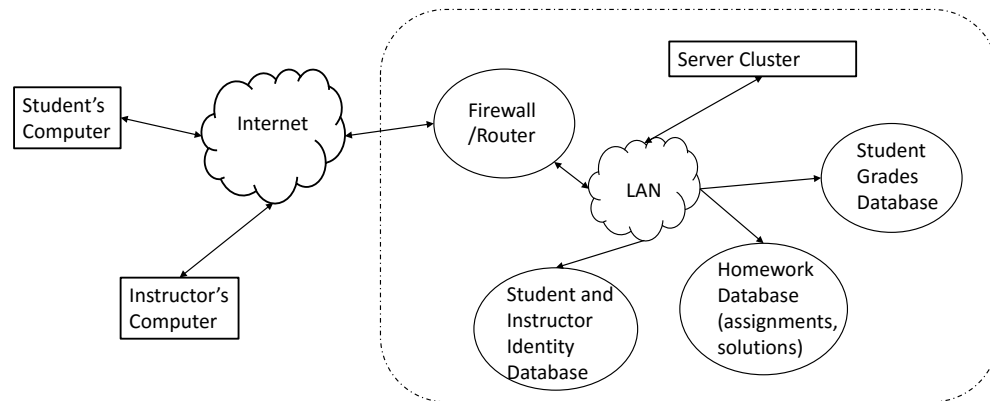
(c) (5 points) List all the access points to the system.

(d) (10 points) List all the threats that an attacker might have for such a photo-sharing site.

2. [SecurelyConstruct] In this question you will do parts of a threat analysis for the Webcourses system (i.e., the system we use at UCF). For purposes of this question, suppose that all this web-based system does is allow: instructors to post assignments, students to upload solutions, assignments, instructors to assign grades to solutions, and students to check their grades. Note that grades are sensitive, due to the federal government's FERPA regulations, so students are only allowed to see their own grades.

Your analysis should assume the following network model.

Webcourses Network Model



- (a) (10 points) Identify all the assets of the webcourses system.
- (b) (5 points) List all the access points to the system.
- (c) (20 points) List all the threats that an attacker might have for the webcourses system.

This page continues the webcourses question from the previous page.

(d) (20 points) Systematically list all the potential attacks that might on the webcourses system.