

Chapter 5

15 Pts What is (are) the primary goal(s) of all "Confidentiality Policies"?

The primary goal of all confidentiality policies is to partition access restrictions for groups of users in relation to whether or not they are authorized to view certain data about or contained within a given system. Based on this authorization that user either has or doesn't have authorization to view user's data that fall under that same policy. Simply: the goal is to prevent the unauthorized disclosure of information.

10 Pts Write a Confidentiality Policy that could be applied to this course.

For This example Student(A) represent will represent the students of this class.

Student(x) will represent a single student in the class

TA will represent the TA

Instructor will represent the course's Instructor

WSU will represent the University

Different factors that need confidentiality will be sorted into the following:

- Assignment Grades (followed by x is the grade given to that student)
- Test Grades (followed by x is the grade given to that student)
- Final Grade (followed by x is the grade given to that student)
- Exams (blank)
- Exam Key
- Class Material
- Students In Process Work

a formal policy could best be outlined as a 'confidentiality' matrix

Material/Users	Student(A)	Student(x)	TA	Instructor	WSU
Assignment Grades		READ	READ	READ	
Test Grades		READ	READ	READ	
Final Grade		READ		READ	READ
Exam (preexam)			READ	READ	
Exam Key			READ	READ	
Class Material	READ	READ	READ	READ	
Assignment Source Code		READ (personal submission)	READ	READ	

The Read permissions are where each user has access to potentially confidential data, and the blanks are where the user cannot access that data.

15 Pts Answer Question 5.2 from the Exercises (pg. 71)

2: Given the security levels TOP SECRET, SECRET, CONFIDENTIAL, and UNCLASSIFIED (ordered from highest to lowest), and the categories A, B, and C, specify what type of access (read, write, both, or neither) is allowed in each of the following situations. Assume that discretionary access controls allow anyone access unless otherwise specified.

Paul, cleared for (TOP SECRET, { A, C }), wants to access a document classified (SECRET, { B, C }).

Paul can neither read nor write the document. He can't write to it because his classification level is too high and can't read since he doesn't have B.

Anna, cleared for (CONFIDENTIAL, { C }), wants to access a document classified (CONFIDENTIAL, { B }).

Anna can't read or write the document because her permissions are not a subset of the documents

Jesse, cleared for (SECRET, { C }), wants to access a document classified (CONFIDENTIAL, { C }).

Jesse can read the document since her clearance set allows her, but she cannot write to it since she's too high

Sammi, cleared for (TOP SECRET, { A, C }), wants to access a document classified (CONFIDENTIAL, { A }).

Sammi can read it, however cannot write to it, due to info leaking about her top secret clearances

Robin, who has no clearances (and so works at the UNCLASSIFIED level), wants to access a document classified (CONFIDENTIAL, { B }).

She can write to the document...since she's lower classified, but it wouldn't be much use since she can't read it.

Chapter 6

15 Pts What is (are) the primary goal(s) of all "Integrity Policies"?

The primary goal of integrity policies are to ensure that a user's data is safe from unauthorized parties altering it.

15 Pts List and define three principles that guide the operation of most/all integrity policies.

- The higher the user's access level the more confidence the system has in the user
- There is a deep relationship between integrity and trustworthiness that must be brought into concern when planning an integrity policy.
- Integrity Levels are not security levels.

10 Pts Write an Integrity Policy that could be applied to this course.

For This example Student(A) represent will represent the students of this class.

Student(x) will represent a single student in the class
 TA will represent the TA
 Instructor will represent the course's Instructor
 WSU will represent the University

Different factors that need confidentiality will be sorted into the following:

- Assignment Grades (followed by x is the grade given to that student)
- Test Grades (followed by x is the grade given to that student)
- Final Grade (followed by x is the grade given to that student)
- Exams (blank)
- Exam Key
- Class Material
- Students In Process Work

a formal policy could best be outlined as a 'integrity' matrix

Material/Users	Student(A)	Student(x)	TA	Instructor	WSU
Assignment Grades			WRITE	WRITE	
Test Grades			WRITE	WRITE	
Final Grade				WRITE	
Exam (preexam)				WRITE	
Exam Key				WRITE	
Class Material				WRITE	
Assignment Source Code or HW		WRITE			

The write permissions are where each user has access to potentially confidential data, and the blanks are where the user cannot write that data.

Chapter 7

10 Pts What are “Hybrid Policies” and why are they needed?

A hybrid security model is a combination of the different security policies to create something that has literal use. It combines integrity, confidentiality policies together to create a policy that envelops all the needed protections.

15 Pts What are RBAC policies?

Role Based Access Control- These policies are mandatory access control policies that let a person have access to information or resources based on their role within an organization.

10 Pts Write an ORCON policy that could be applied to this course.

An Orcon policy that could apply to this course would be one that had the origination of the material control the access. This could be the Instructor passes down material to the TA, in the form of a solution to an assignment, but does not necessarily want that material to be available to students until after the assignment is graded.

