

# Day 2 - Chapter 1

## Project

The company under review must not be associated with Mississippi State University.  
Groups will be decided on Monday.

## Slide Notes

This is not hacking 101.

We are trying to wrap our head around how we protect information and what business decisions are made in this process

## Outline

- CIA Triad
- Other Security Concepts
- Data Classification

## Security in a nutshell

Subjects are allowed or denied access to an object.

### Subjects

The user/process/system requesting access to a protected resource

### Objects

The protected resource

## CIA Triad

# Confidentiality

- Keeping information protected from unauthorized access
- Violation
  - Capturing network traffic / Eavesdropping
  - Social engineering
  - Port scanning
  - Shoulder surfing
- Relies on Integrity
  - Necessary, but not sufficient
- Previous versions of Study Guide: Most important goal for government agencies

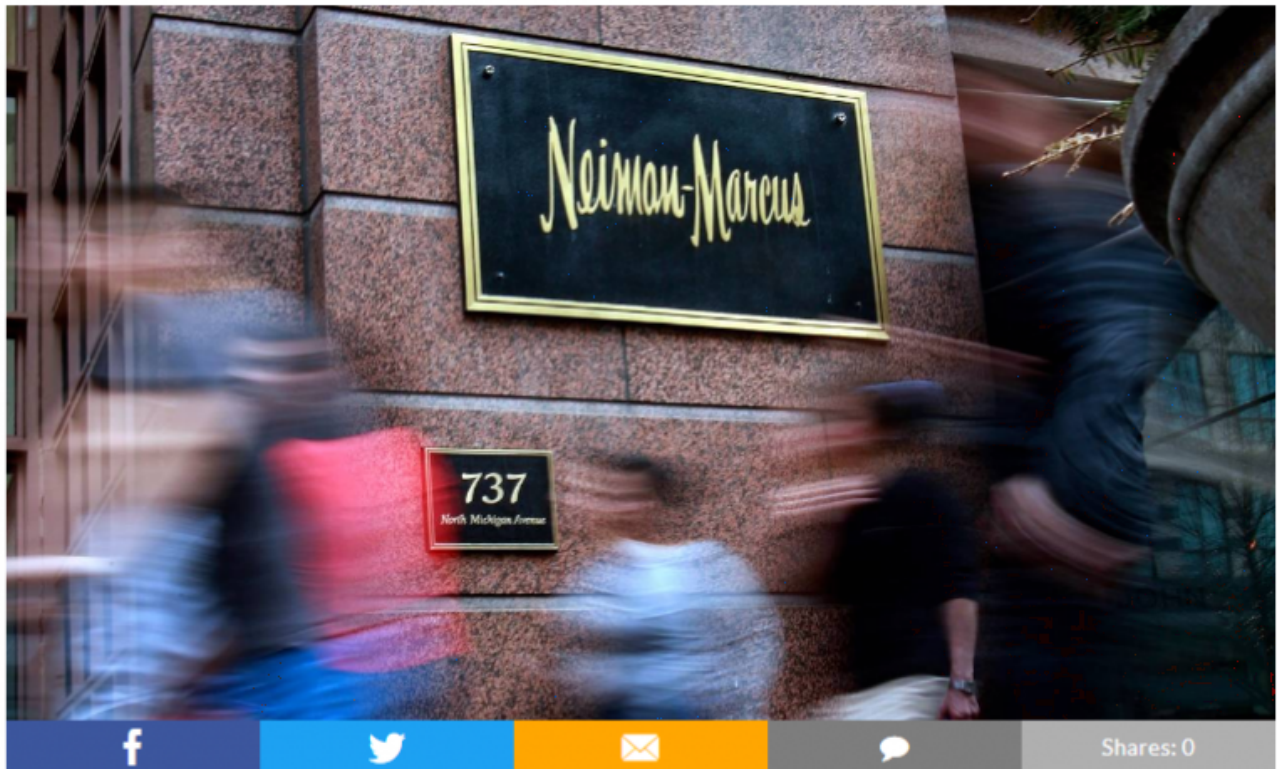
## Violation of Confidentiality

BUSINESS

# Neiman Marcus reaches a \$1.5 million data breach settlement

Posted: 3:20 AM, January 09, 2019

Updated: 3:20 AM, January 09, 2019



**AUSTIN, Texas** - More than 40 state attorneys general have announced a \$1.5 million settlement with The Neiman Marcus Group LLC over a data breach the Dallas-based retailer disclosed in January 2014.

The breach exposed customer credit card data at 77 Neiman Marcus stores nationwide. Over a three-month period in 2013, about 370,000 Neiman Marcus credit cards were accessed by unknown third parties unlawfully, and at least 9,200 were used fraudulently.

## Integrity

- Information can only be modified by authorized subjects
  - Information is protected from “honest mistakes”
  - Information is valid, consistent, and verifiable
- Violations
  - Viruses
  - “Logic Bombs”
  - Sabotage
- Dependent on confidentiality

## Violation of Integrity



## Availability

- Information is timely and accessible to subjects
  - Handles interruptions and outages
- Violations
  - Attacks (denial of service)
  - Device failure
  - Environmental issues
- Dependent on both confidentiality & integrity
- Most important goal for business organizations (p.7)

## Violation of Availability



JANUARY 7, 2019 BY ANDREA LOPEZ

## Distributed Denial-Of-Service (DDoS) Protection Market Growth 2019 : Global Key Business Trends,A10 Networks, Genie Networks

The Market Research Study titled **Global Distributed Denial-Of-Service (DDoS) Protection Market Size, Status and Forecast 2019**



### RECENT POSTS

Global Inspection Crawlers Market to Record Rise in Incremental Opportunity During the Forecast Period (2018-2025)

## CIA Triad + 1

### Agility (Harvard Business School)

- “The capability to change with managed cost and speed”- Westerman and Hester
- Could affect:
  - Developing countermeasures
  - Availability
- Trade-off between agility and security?

## Other Security Concepts

### Privacy

- Multiple definitions
  - Freedom from being observed, monitored, or examined without consent or knowledge
- Company Monitoring
  - 4th amendment rights
- “If you gather any type of information about any person or company, you must address privacy”

## Accountability

- The capability to prove a subject’s identity and track their activities

## Nonrepudiation

- Ensures that the subject of an activity or event cannot deny that the event occurred
- “A suspect cannot be held accountable if they can repudiate the claim against them” (p.32)

# Data Classification

A realistic means of securing data based on its “value”

Useful for:

- Determining where best to deploy security resources
- Establishing access control and rights
- Implementing procedures for data dissemination, maturation, storage, and disposal

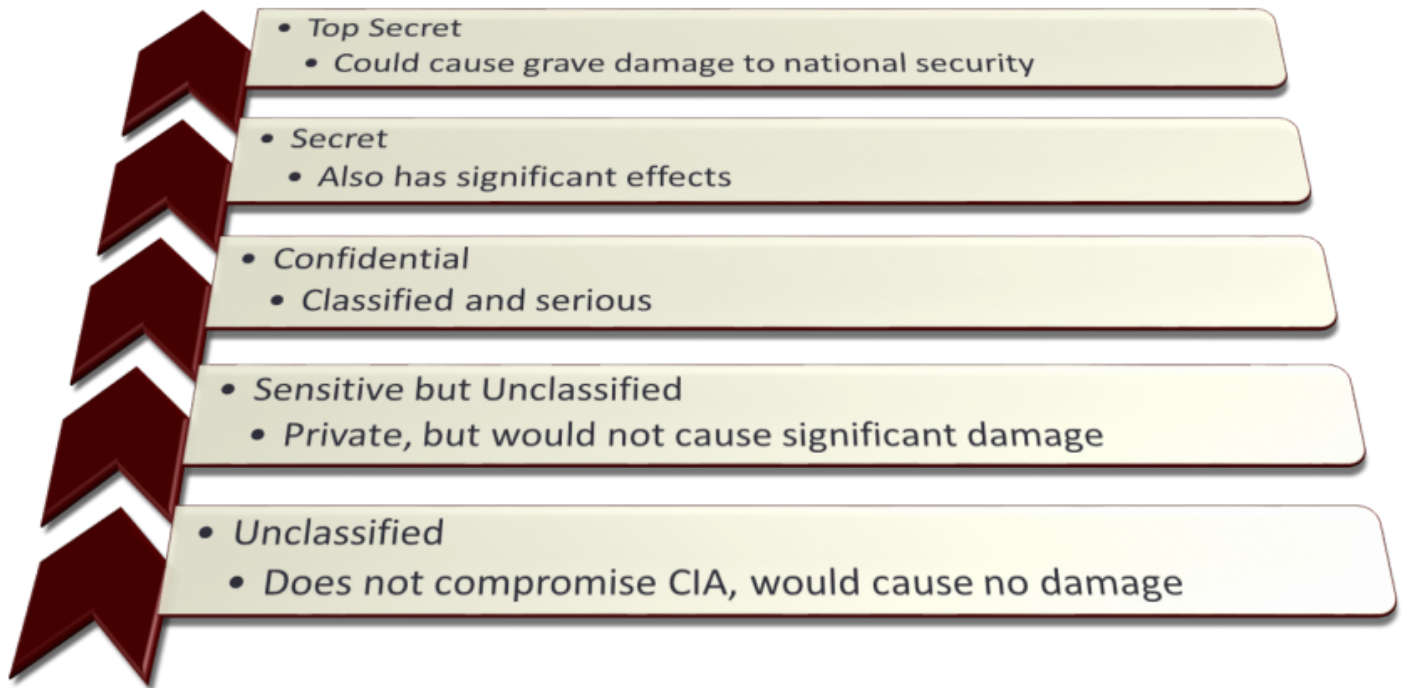
## Hierarchical View of Data



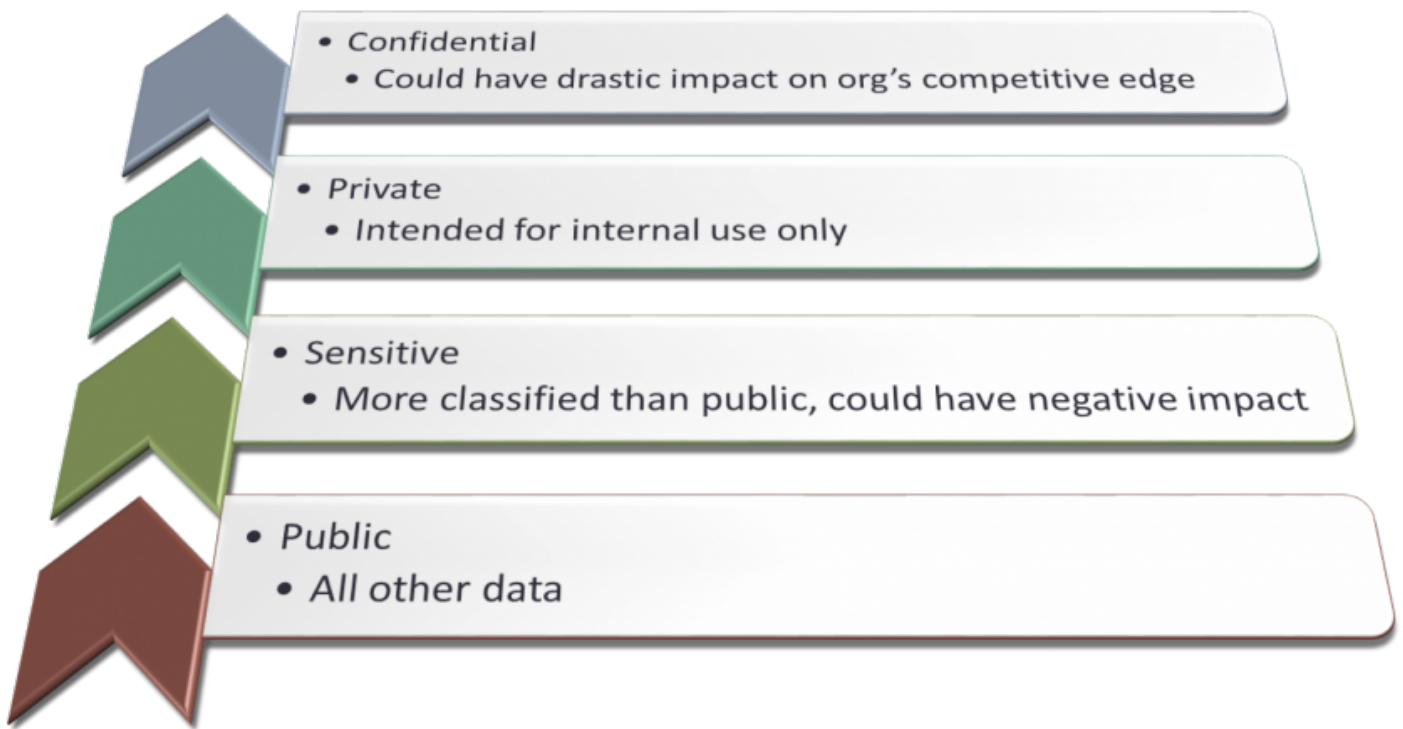
# Data Classification



## Government/Military



## Business/Corporate



# Security Standards

National Institute of Standards and Technology (NIST)

International Organization for Standardization (ISO)

International Society for Automation (ISA)

Federal & State Laws

- HIPAA
- Sarbanes-Oxley / COBIT
- Banking (Gramm-Leach-Bliley Act)

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