

# Lecture 5: Privacy

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CS 181S

Spring 2024

Confidentiality  
Integrity  
Availability

# What is Privacy?



# What does Privacy Mean to You?


- Draw a picture that represent privacy to you
- Or feel free to jot down some words, phrases, or a poem



Contribute | Privacy Illustrated

cups.cs.cmu.edu/privacyillustrated/?page\_id=445

Contribute | Privacy Illustrated




**Privacy Illustrated** ABOUT US BLOG **CONTRIBUTE** IMAGES OF PRIVACY

## CONTRIBUTE

What does privacy mean to you?

Contribute to the dialogue by submitting your own picture.

Please draw a picture of what privacy means to you and then upload it below. You can either draw the picture on paper and then take a picture of it to upload or scan it for upload. Alternatively, you can draw it using a tablet or other electronic medium and then upload it.



### RECENT POSTS

- [The making of Privacy Illustrated: Kids with their drawings](#)  
January 14, 2015
- [Privacy Illustrated in the Pittsburgh Post-Gazette](#)  
January 12, 2015
- [Join us for CMU Privacy Day on January 28](#)  
January 12, 2015
- [Privacy Illustrated appears in new Deep Lab book](#)  
December 23, 2014
- [Privacy Illustrated Book Chapter](#)  
December 13, 2014

<http://cups.cs.cmu.edu/privacyillustrated/>



Privacy is being by myself.

– Emma, age 5



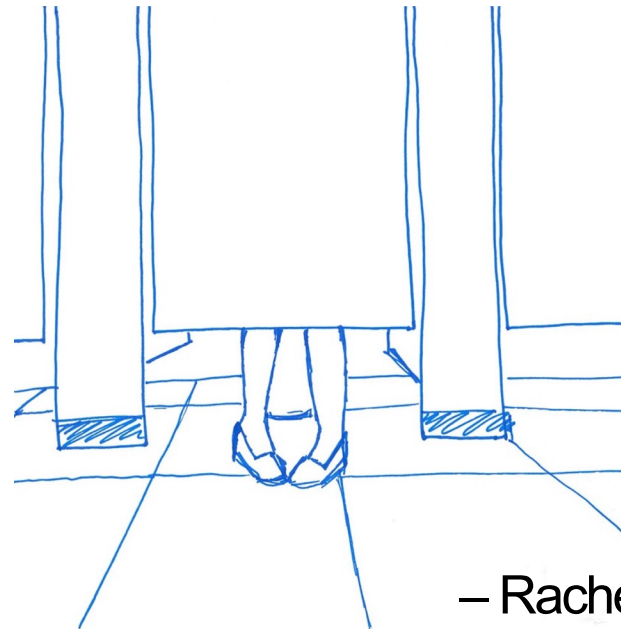
Privacy is the right to be by yourself. Privacy is isolation.

– Kevin, age 28



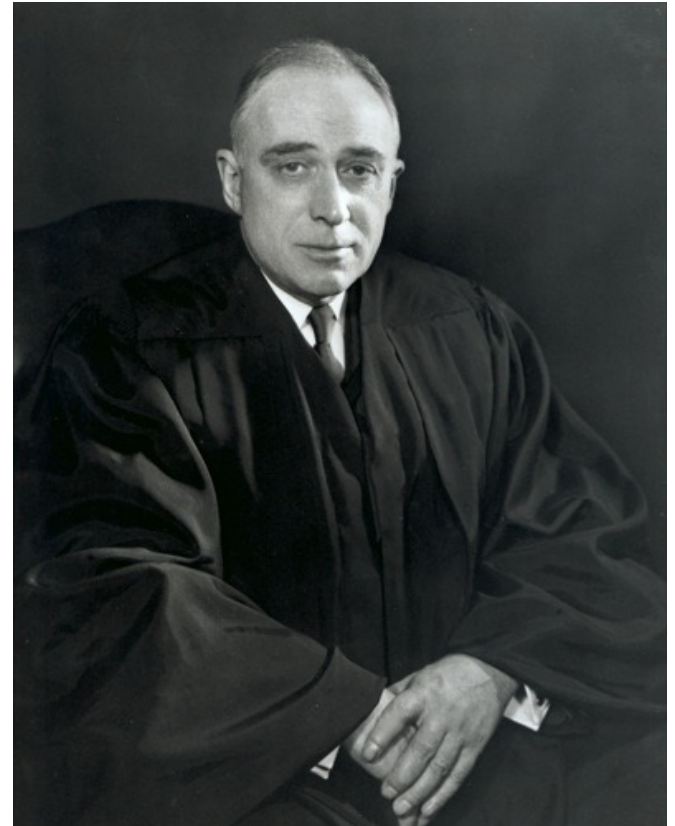
Your room is  
private.

– Alexia, age 11



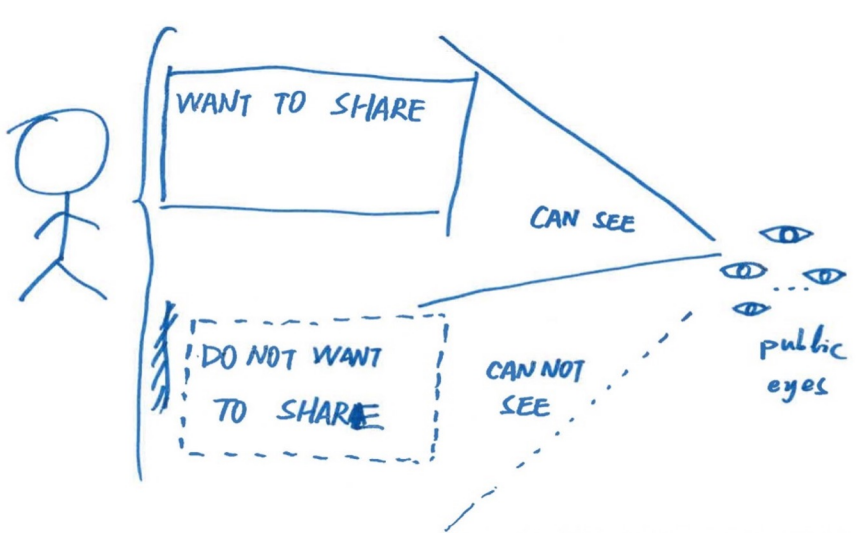
– Rachel, age 20

# "The Right to Privacy" (1890)



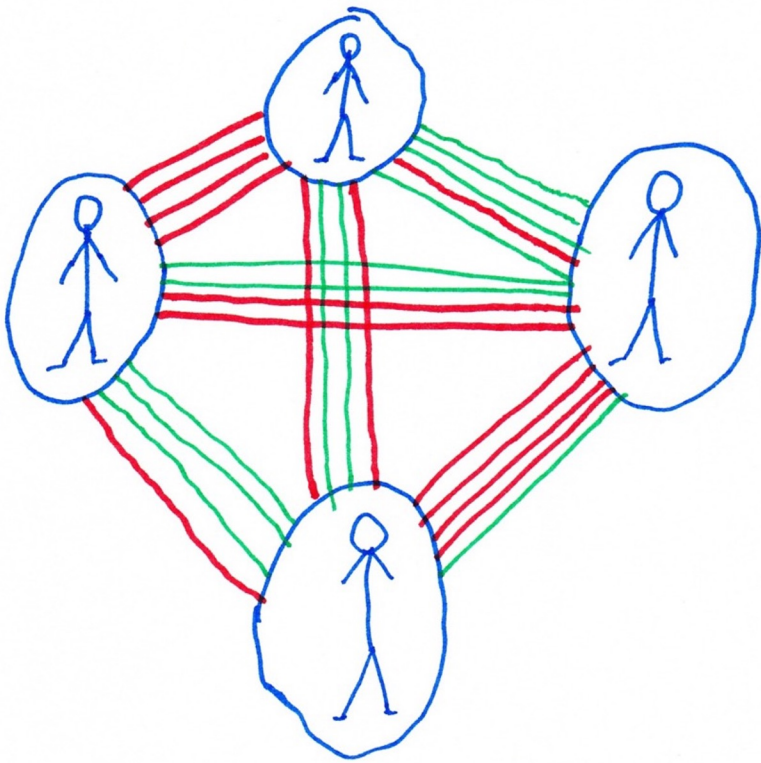
- Right to be left alone
- Some data is private





People have right to keep what they do not want to share invisible.

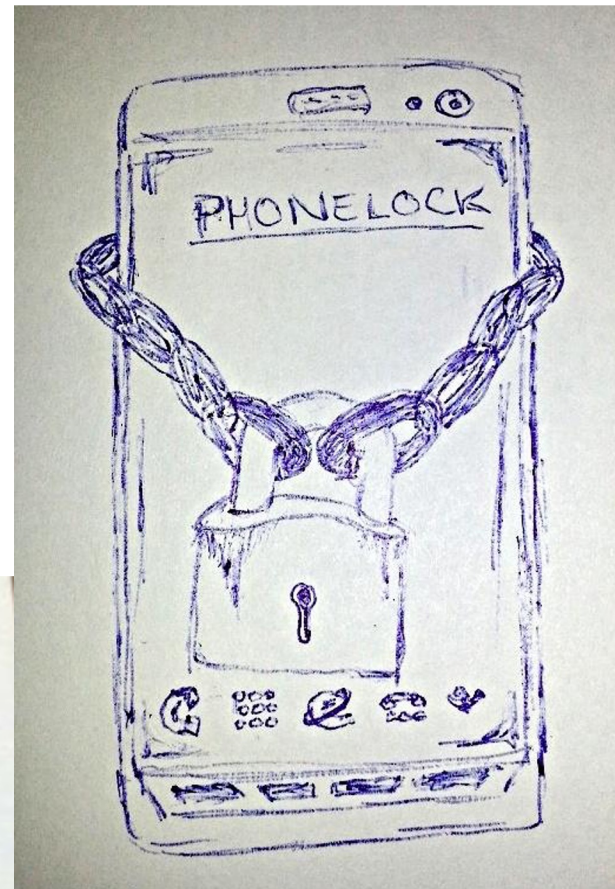
– AC, age 24



Privacy is a network: I share what I want with whom I want and trust and what matches with those in the network....

Green = share.  
Red = don't.

Madeline Age 11

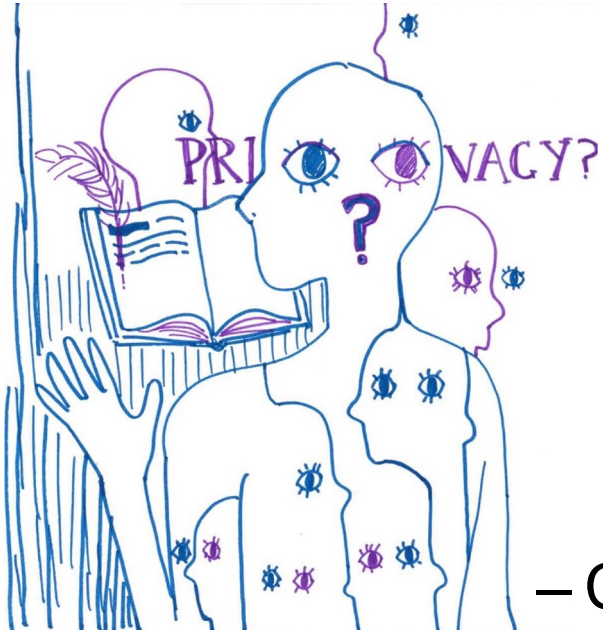


# Privacy and Freedom (1967)

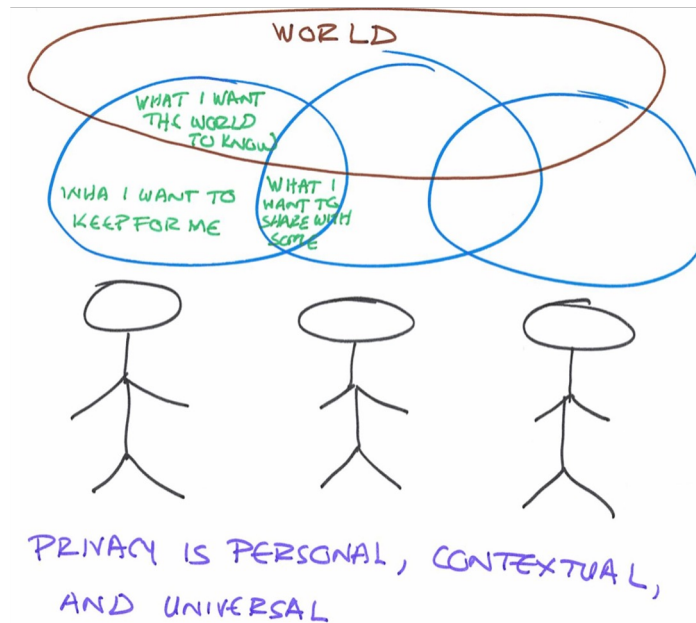
Privacy is the claim of individuals, groups or institutions to determine for themselves when, how, and to what extent information about them is communicated to others.

– Alan Westin





– C, age 20



Privacy is a value that is very important to have in a society to work and progress

– Pedro, age 35

# Contextual Integrity



- defines privacy relative to appropriate context
- considers information type, time, location, purpose, principals involved (subject, sender, receiver)
- dependent on social norms
- norms can change over time

# Privacy as Vulnerabilities



- limitations of norms for protecting privacy
- vulnerable populations
  - more likely to be susceptible to violations
  - harms are higher impact
- draws on feminist and queer theory

# Approaches to Privacy

- Ignore it
- Self-regulation
- Legal regulation



**facebook**



Cambridge  
Analytica



# FIPPs

The FTC's Fair Information Practice Principals (FIPPs) are the most broadly recognized guidelines for handling private data in information systems

- Seek consent
- Minimize data use
- Limit storage
- Avoid linking

# OECD fair information principles

- Collection limitation
- Data quality
- Purpose specification
- Use limitation
- Security safeguards
- Openness
- Individual participation
- Accountability

# General Data Protection Regulation

**Goal:** Codify fundamental right to protection of personal data.

- Introduced individual rights
  1. The right to transparency
  2. The right to access
  3. The right to correct
  4. The right to delete
  5. The right to data portability
  6. The right to withdraw consent
  7. The right to object
- Additional obligations
  - Legal basis for processing
  - Purpose limitation
  - Data Minimization
  - Storage limitation
  - Security requirements
  - Privacy by design
- Adopted: April 14, 2016
- Effective: May 25, 2018

# California Consumer Privacy Act

- **Goal:** Give users more control over their personal information.
- Introduced four key rights:
  1. The right to know
  2. The right to delete
  3. The right to opt-out of sale and limit use of personal information
  4. The right to non-discrimination
- Signed: June 28, 2018
- Enforced: July 1, 2020
- Amended: January 1, 2023 (CPRA)



**AND NOW FOR SOMETHING  
COMPLETELY DIFFERENT.**

# Course Projects

## Project Description

CS 181S students are expected to participate in a group project to build a software system that has non-trivial security functionality. A high-level introduction to the project is given in the [project overview](#). More details will be supplied throughout the semester as part of each project milestone.

## Project Milestones

Milestone	Description	Due Date
M0	Charter	<b>Tues February 6 at 11:59pm</b>
M1	Requirements	<b>Tues February 13 at 11:59pm</b>
M2	Prototype	<b>Tues March 5 at 11:59pm</b>
M3	Alpha Release	<b>Tues April 2 at 11:59pm</b>
M4	Beta Release	<b>Tues April 23 at 11:59pm</b>
M5	Final Project Deadline	<b>Tues April 30 at 11:59pm</b>
	Final Presentations	<b>April 29 and May 1, in class</b>

# Forming a group...

- What system(s) are you exciting about building?
- What skills/experience will you bring to a group?
- How challenging do you want your project to be?
- How often/when are you available to meet?
- What programming language do you want to use?