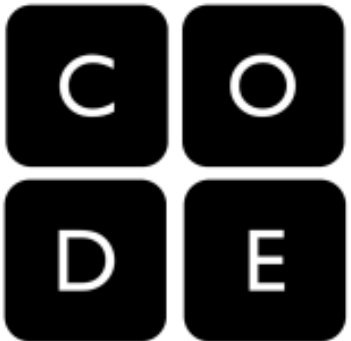
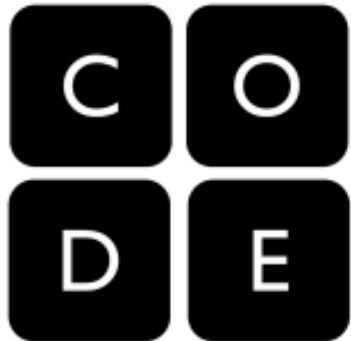


Identifying People with Data

Unit 4 Lesson 5 (U4L5)



[U4L5 Identifying People with Data INB](#)
[World's Biggest Data Breaches Visualization](#)
[Data Privacy Lab](#)
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Warm-Up

Write 2018 in hexadecimal. 7 E 2

16^2	16^1	16^0
256	16	1
7	E	2

Why did we stop at 16^2 ?

Start with 2018, how many of the value of the power divide into 2018? (repeat)

Why did we write E and not 14?

$2018 \div 256 = 7.##$

$226 \div 16 = 14.##$

$2 \div 1 = 2$

$2018 - (256 * 7) =$

$226 - (16 * 14) =$

$2 - (1 * 2) =$

$2018 - 1792 = 226$

$226 - 224 = 2$

$2 - 2 = 0$

[World's Biggest Data Breaches Visualization](#) - Web Site (link in Code Studio)

Spend 5 minutes browsing the different breaches and answer the questions in your INB.

What kind of data is being lost? And how much?

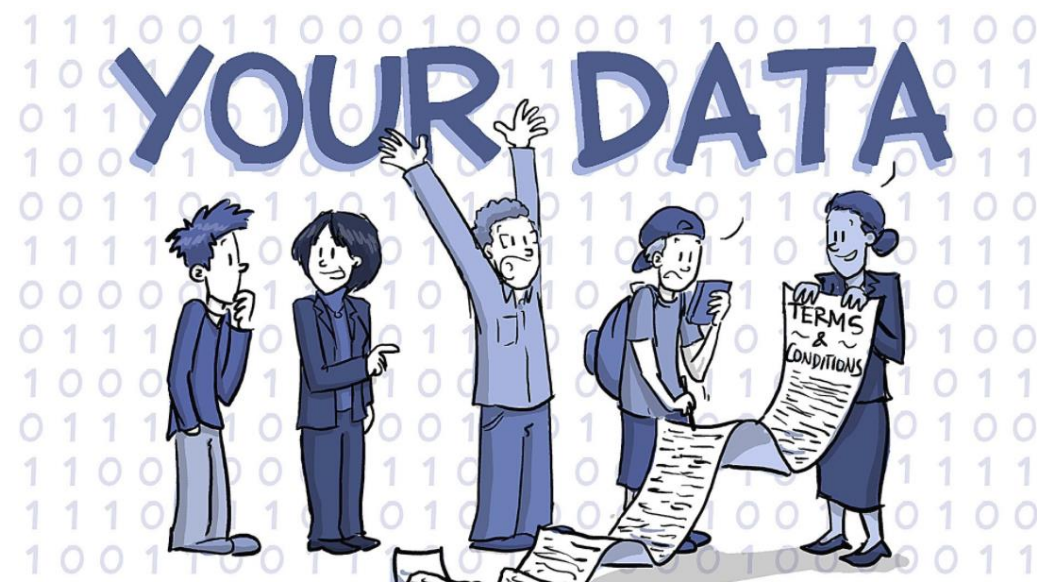
All kinds of personal data, from usernames to social security numbers and credit card information, is lost fairly regularly.

What kinds of issues could arise from this data getting into the wrong hands?

This information can be used to steal money or identities, get access to classified information, blackmail people, etc.

Share with your neighbor.

Share as a class.



Data Privacy Lab: How easily can you be identified?

In the data breaches we just looked at, some fairly important pieces of information were stolen. Credit card numbers, passport information, or government security clearances are obviously not something we'd like to fall into the wrong hands. Other pieces of information, however, don't seem that bad.

So what if people know your ZIP code? So what if people know your birthday? This is information we usually share without a second thought.

Go to the [website](#) (link in Code Studio) and enter in "your"
Record the results in your INB.



How Unique are You?

Enter your ZIP code, date of birth, and gender to see how unique you are (and therefore how easy it is to identify you from these values).

Date of Birth

Gender Male Female

5-digit ZIP

Data Privacy Lab: How easily can you be identified?

Prompt:

(INB) Why is it significant that you are one of only a few people with your birthday, gender, and ZIP code? What concerns does this raise?

- We can be uniquely identified from just a few pieces of information.
- Even information we would not normally consider to be “sensitive” can still be used to identify us.
- There are security and privacy concerns raised as a result of most information about us being available online.



How Unique are You?

Enter your ZIP code, date of birth, and gender to see how unique you are (and therefore how easy it is to identify you from these values).

Date of Birth

Gender Male Female

5-digit ZIP

As we just saw, there are security and privacy issues that are raised, even when small, seemingly unimportant pieces of information are available online. Most of the time, we don't actually think about what kinds of information are available about us, or how someone might connect the dots with that information.



Activity Guide - Research Yourself (15 mins)

Your Digital Self

You may already be aware of information about you that is freely available online, but you probably haven't thought about it from the standpoint of research. Suppose someone were to research you online. What would they be able to find? What connections could they make from the existing data out there to learn even more about you?

Conducting Your Research

You should look through any publicly available pieces of information online. Start by simply looking up your name in a search engine but then refine your results by adding more specific information, like the place you live. Don't forget social networks, your school website, or any other websites you frequently use.

Record Your Findings

In the space in your INB record the information you find about yourself. If you know something is available online but can't get to it now, record it anyway.

Wrap-Up

Prompt:

"What information were you able to find about yourself? Were you able to make connections in the data you collected to figure out anything else? Were you concerned about anything you were able to find?"




A great deal of information about us is freely and easily available online.

By making connections in this data or to other sources of data, it is possible to form a more complete picture of who we are and what we do.

There are security and privacy concerns raised by the data we post online about ourselves.

AP Practice Response - Identify the Data Concern

▼ Lesson 5: Identifying People with Data

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-  2 AP Practice Response - Identify the Data Concern
-  3 Check Your Understanding

AP Practice - Identify the Data Concern

One component of the **AP Explore Performance Task** is describing a data concern related to a computing innovation.

Computing Innovation

2d. Using specific details, describe

- at least one data storage concern, data privacy concern, or data security concern directly related to the computing innovation.

Here's the scoring guide for this part of the question

<p>Row 7</p> <p>Analyzing Data and Information</p>	<p>RESPONSE 2D</p>	<ul style="list-style-type: none"> Identify one data storage, data privacy, OR data security concern related to the identified or described computing innovation. 	<p>Responses should be evaluated on the rationale provided in the response not on the interpretation or inference on the part of the scorer.</p> <p>Responses can earn this point even if they refer to the data in a general without specifically identifying the data being used.</p> <p>Do NOT award a point if any one of the following is true:</p> <ul style="list-style-type: none"> the described innovation is not a computing innovation; or the response identifies or describes a concern that is not related to data.
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Sample Responses

Two of the responses below qualify as a data storage, privacy or security concern and two do not. Can you identify the two that do?

Response A: *Facial recognition technology stores data mapping a user's face. A privacy concern for this technology is that it could be used by businesses and governments to identify people as they walk around in their daily lives.*

Response B: *Software that tracks soccer player movements on the field can be used to generate new statistics that help value contributions of individual players. A data concern is that this information may be used to justify getting rid of less productive players.*

Response C: *Social networks allow users to share vast amounts of private information about their lives. A security concern of this technology is that this publicly available data may enable stalkers or other criminals to identify potential targets.*

Response D: *Self-driving vehicles store vast amounts of information about their location and the world around them. A data concern for the trucking industry is that all of this information could be coordinated to make trucks more efficient causing many people who drive trucks for a living to lose their jobs.*

Choose the two (2) responses that are data concerns

Choose the two responses (A, B, C, or D) that would earn the point as data storage, security or privacy concern. Then justify why you chose them.

Enter your an

For Teachers Only

Responses A and C would likely earn the point for this response.

They identify a data privacy or security concern directly related to the data being stored by the innovation, *and* the data is not being used in a way intended by the innovation.

Responses B and D would likely NOT earn the point.

These responses do not identify a data privacy or security concern because they both refer to the data being used in ways intended by the innovation - as opposed to the data being stolen or misused. Instead these responses identifies a potential "harmful effect" of the innovation (following the AP definition of a harmful effect).

The distinction between data concerns and harmful effects according to College Board definitions is nuanced. For more clarity, consider consulting the Explore PT Survival Guide presented in the AP: Explore PT Prep Unit.

Submit

Check Your Understanding

▼ Lesson 5: Identifying People with Data



Lesson Overview



AP Practice Response - Identify the Data Concern



Check Your Understanding