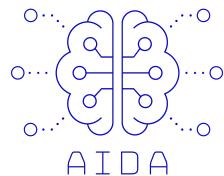
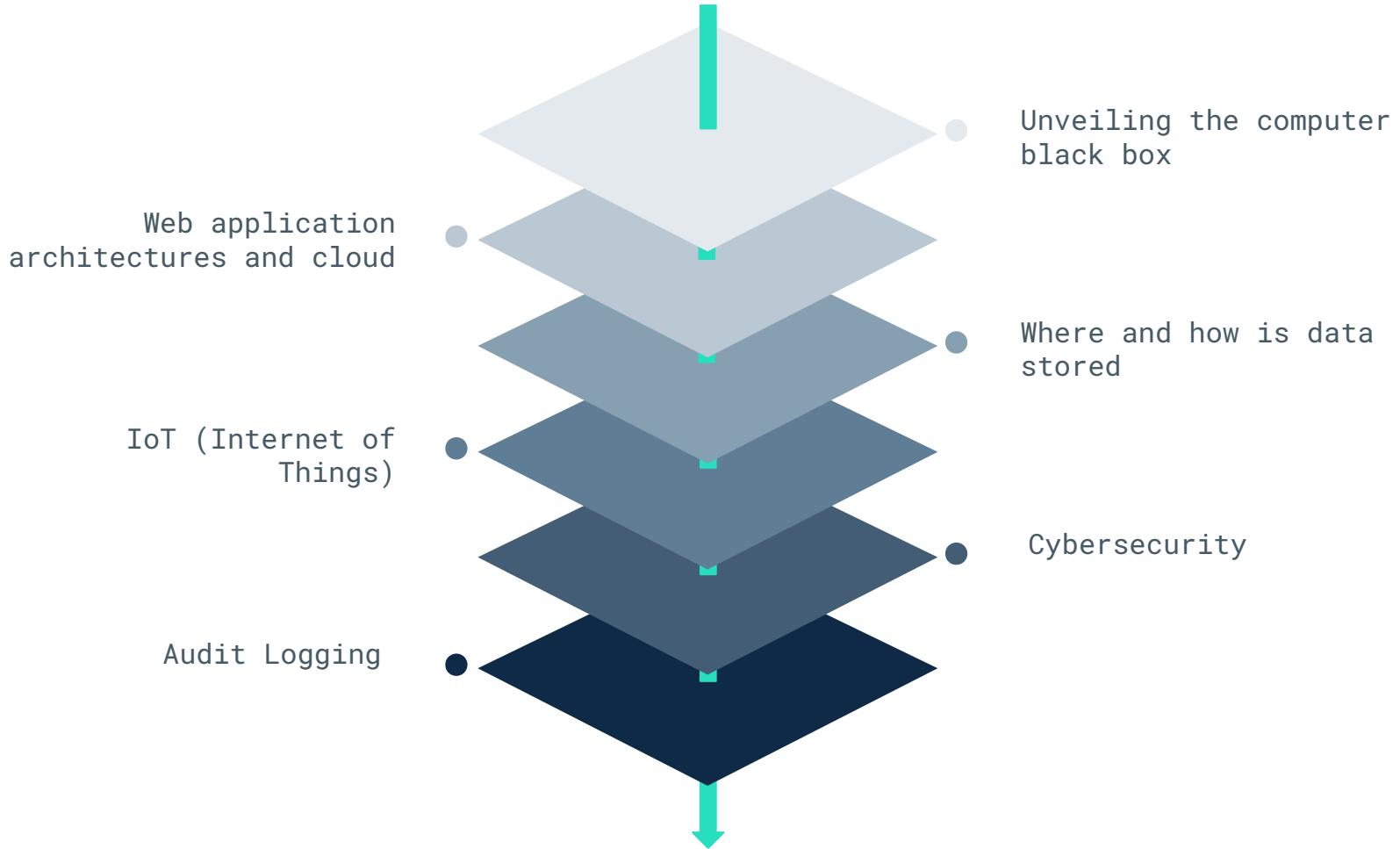
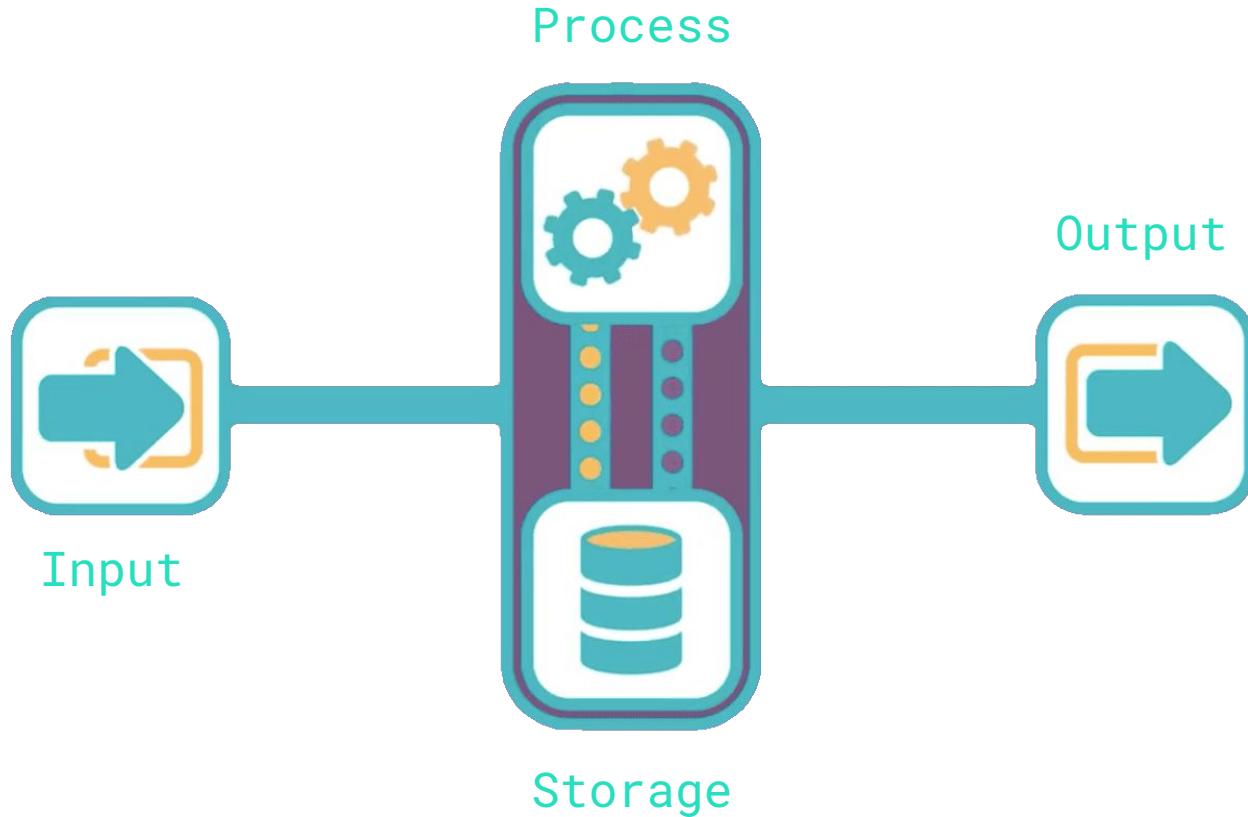


# Digital Literacy Workshop

Law in Tech Companies

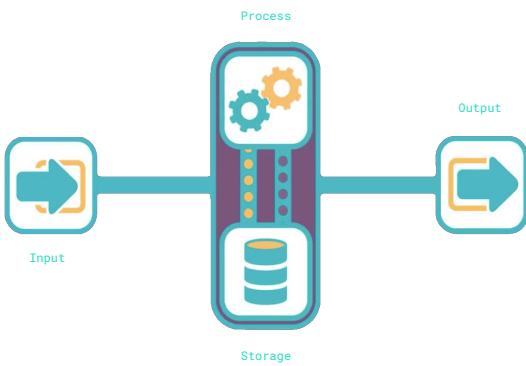






1  
0001 0110  
010100 01110010  
01110010 00100000  
01 00100000 01110100 0110  
01110 01100100 00100000 0110  
0100000 01101101 01100100 0110  
1 01100001 01101110 0100  
110 00110000 00110000 0100  
100101 01110010 01110010 0111001  
01100001 01101110 0000  
00 00100000 01100011 01100011  
1001 01101111 01101111 0110111  
1001 01101010 01101010 0110101

**01001001 <- I**

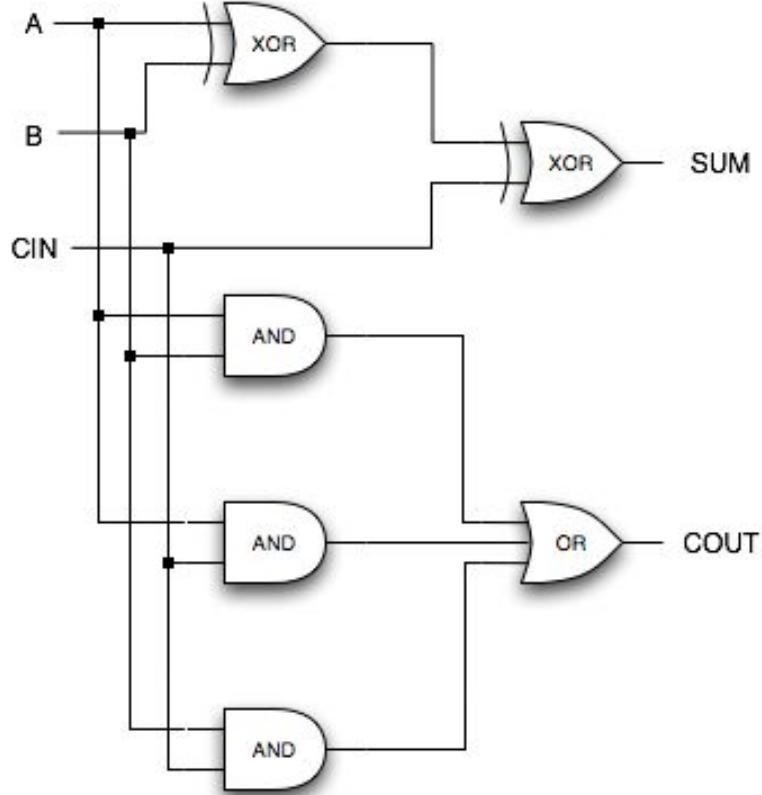
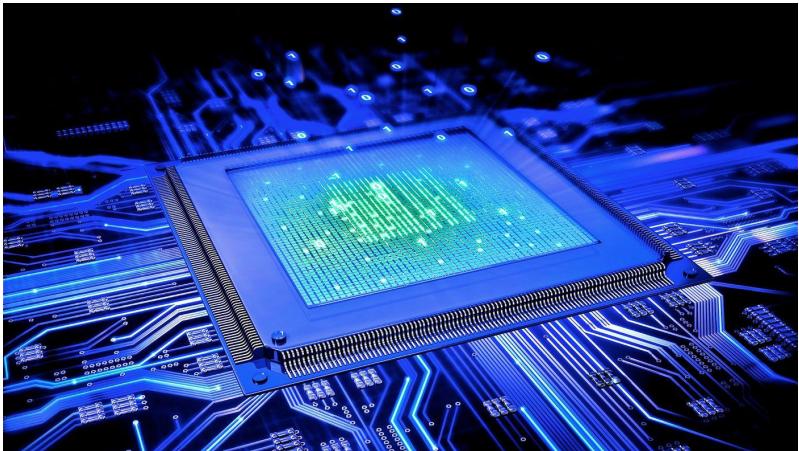


0100  
1001  
0010  
1101  
1111  
1010



**Input -> Output**

*Unveiling the Computer Black Box*



“Talk is cheap.  
Show me the code.”

|

**Linus Torvalds**

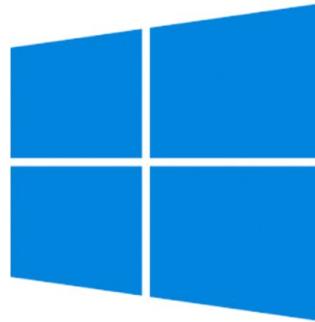
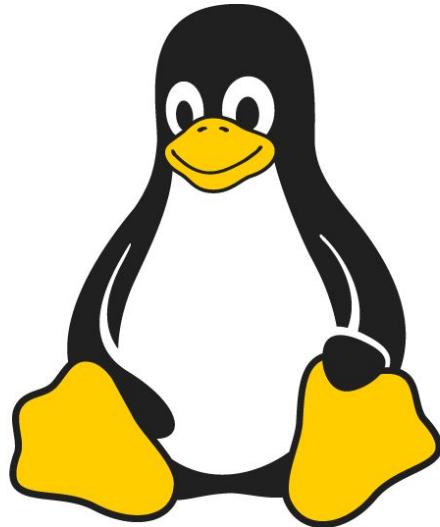


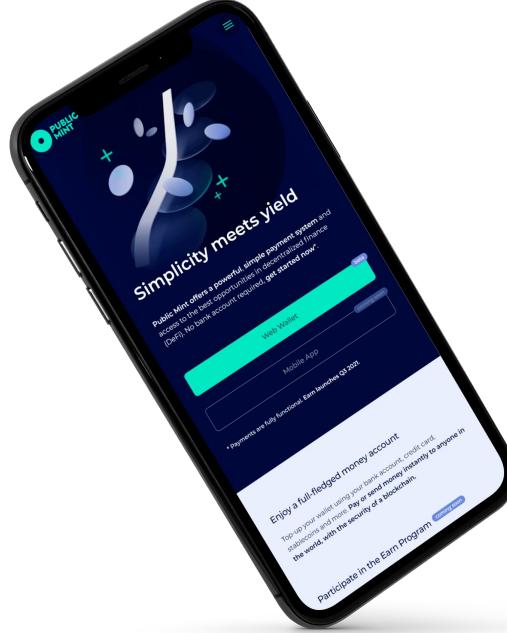
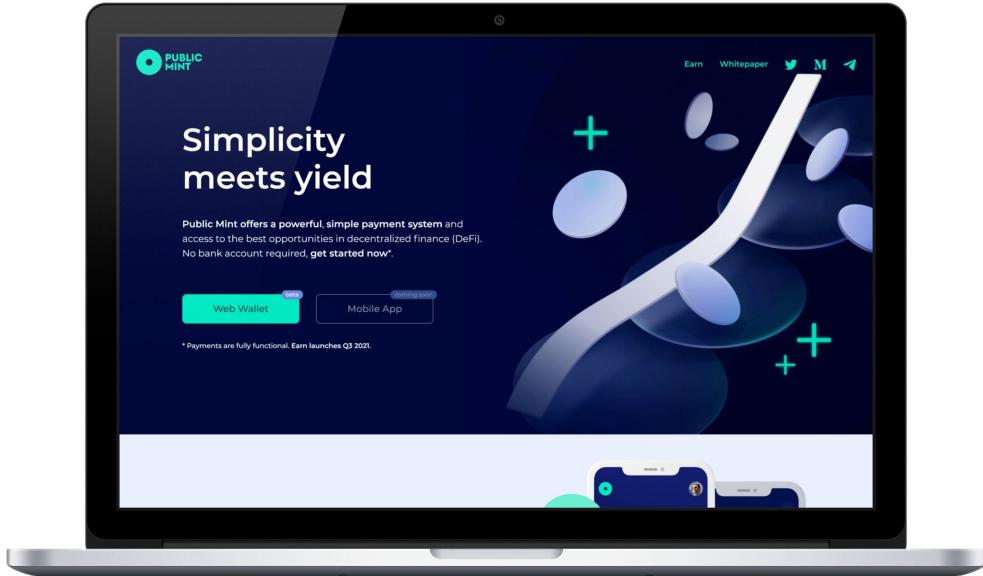
1: 01111111 01000101 01001100 01000110 00000010 00000001  
2: 00000001 00000000 00000000 00000000 00000000 00000000  
3: 00000000 00000000 00000000 00000000 00000010 00000000  
4: 00111110 00000000 00000001 00000000 00000000 00000000  
5: 01000000 00010000 01000000 00000000 00000000 00000000  
...  
3250: 00000000 00000000

```
1: main:  
2: .LFB0:  
3: .cfi_startproc  
4: pushq %rbp  
5: .cfi_def_cfa_offset 16  
6: .cfi_offset 6, -16  
7: movq %rsp, %rbp  
8: .cfi_def_cfa_register 6  
9: subq $32, %rsp  
10: movl %edi, -20(%rbp)  
11: movq %rsi, -32(%rbp)  
12: movl $0, -4(%rbp)  
13: jmp .L2  
...  
40: .section .note.GNU-stack,"",@progbits
```

```
1: #include <stdio.h>
2:
3: int main(int argc, char** argv) {
4:
5:     int index;
6:
7:     for (index = 0; index < 10; index++) {
8:         printf("%d\n", index);
9:     }
10:
11:    return 0;
12:}
```

```
1: for index in range(0, 10):  
2:     print(index)
```





```
SELECT p0."id", p0."name", p0."inserted_at", p0."updated_at", l1."id" FROM "practice_areas" AS p0 INNER JOIN "lawyers" AS l1 ON l1."id" = ANY($1) INNER JOIN
"lawyer_practice_areas" AS l2 ON l2."lawyer_id" = l1."id" WHERE (l2."practice_area_id" = p0."id") ORDER BY l1."id" [[1]]
[debug] QUERY OK source="practice_areas" db=0.4ms idle=820.7ms
SELECT p0."id", p0."name", p0."inserted_at", p0."updated_at" FROM "practice_areas" AS p0 WHERE (p0."id" = ANY($1)) [[1, 2, 3]]
[debug] QUERY OK db=0.1ms idle=821.2ms
begin []
[debug] QUERY OK db=0.7ms
INSERT INTO "lawyer_practice_areas" ("lawyer_id","practice_area_id") VALUES ($1,$2) [1, 3]
[debug] QUERY OK db=1.1ms
commit []
[info] Sent 302 in 10ms
[info] GET /lawyers/1
[debug] Processing with WldWeb.LawyerController.show/2
  Parameters: {"id" => "1"}
  Pipelines: [:browser]
[debug] QUERY OK source="lawyers" db=1.2ms idle=879.2ms
SELECT l0."id", l0."birthday", l0."first_name", l0."last_name", l0."inserted_at", l0."updated_at" FROM "lawyers" AS l0 WHERE (l0."id" = $1) [1]
[debug] QUERY OK source="practice_areas" db=0.9ms idle=880.9ms
SELECT p0."id", p0."name", p0."inserted_at", p0."updated_at", l1."id" FROM "practice_areas" AS p0 INNER JOIN "lawyers" AS l1 ON l1."id" = ANY($1) INNER JOIN
"lawyer_practice_areas" AS l2 ON l2."lawyer_id" = l1."id" WHERE (l2."practice_area_id" = p0."id") ORDER BY l1."id" [[1]]
[info] Sent 200 in 7ms
```

**PUBLIC MINT**

Dashboard

## Let's get started

Deposit USD to gain access to all Public Mint Wallet features. If you don't want to deposit just now, you can also get a head start and [login with a Public Mint Account](#).

Wire Transfer      ACH      Credit/Debit Card      Stable Coins

Wallet

USD - US Dollars  
\$0.00

0x774971cAC33D09F2dDf9Db959817A91a5Db06aa8

SEND    DEPOSIT    WITHDRAW

My wallets

No activity

Network

Name	Status	Type	Initiator	Size	Time	Waterfall
rpc.publicmint.io	200	xhr	trycatch.js:165	297 B	104 ms	
api?module=account&action=tokenbx&address=0x774971cAC33D09F2dDf9Db959817A91a5Db06aa8	200	xhr	trycatch.js:165	294 B	102 ms	
api?module=account&action=txlist&address=0x774971cAC33D09F2dDf9Db959817A91a5Db06aa8	200	xhr	trycatch.js:165	145 B	90 ms	
rpc.publicmint.io	200	xhr	trycatch.js:165	382 kB	480 ms	
payment-methods.fba01912bbf78d0d7c.js	200	script	payment-methods	382 kB	480 ms	
fetch-user.62ee3a07116c3b5d53c8.js	200	script	fetch-user	55.9 kB	268 ms	
US?type=deposit	200	xhr	VM181 payment-methods.fba01912bbf78d0d7c.js:2	598 B	192 ms	
favicon.492e4da27731f4a79025a830bd50fb24.ico	200	vnd.microsoft.icon	Other	1.9 kB	242 ms	
rpc.publicmint.io	200	xhr	trycatch.js:165	145 B	88 ms	
rpc.publicmint.io	200	xhr	Other	0 B	57 ms	

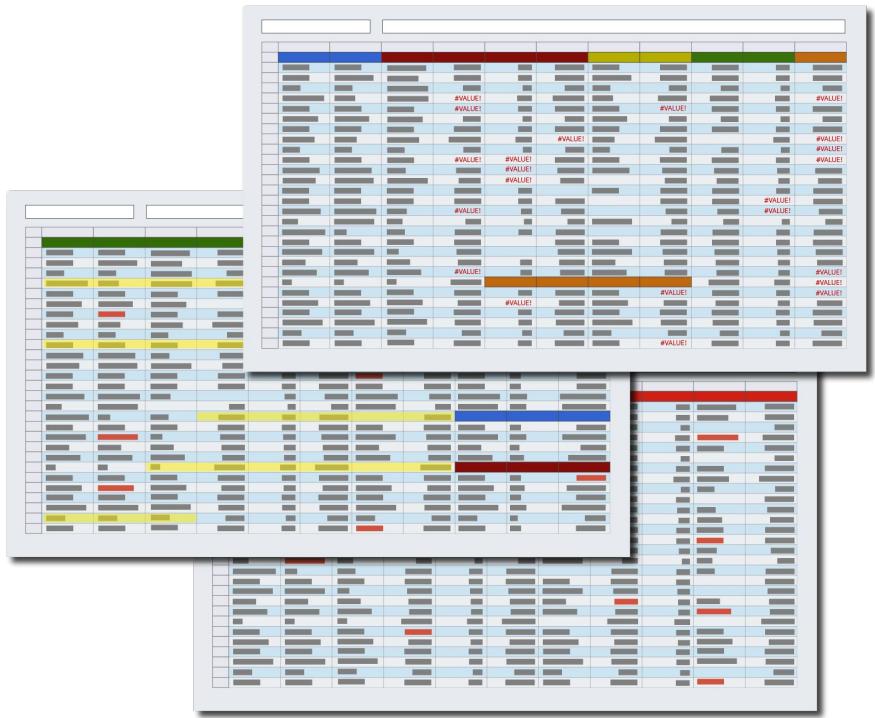
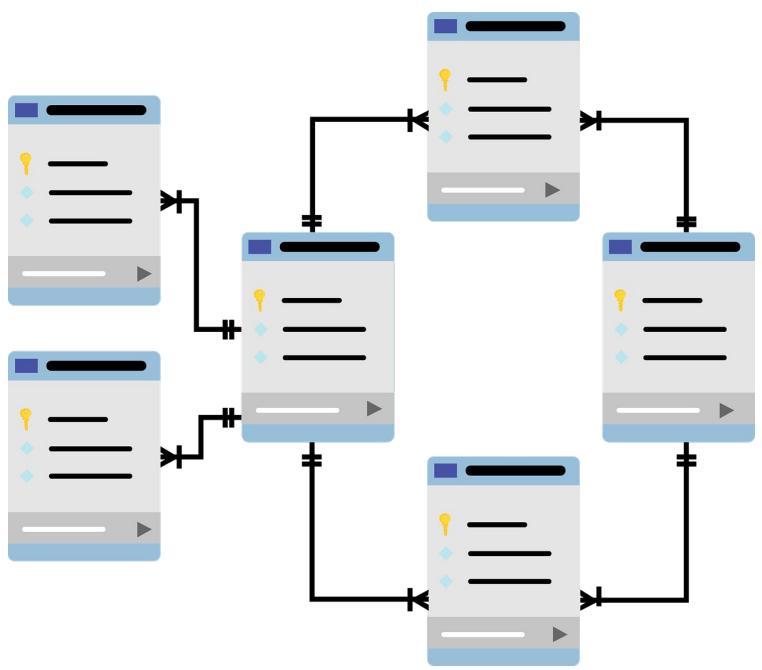
24 requests | 1.3 MB transferred | 4.7 MB resources | Finish: 21.74 s | DOMContentLoaded: 1.63 s | Load: 2.71 s

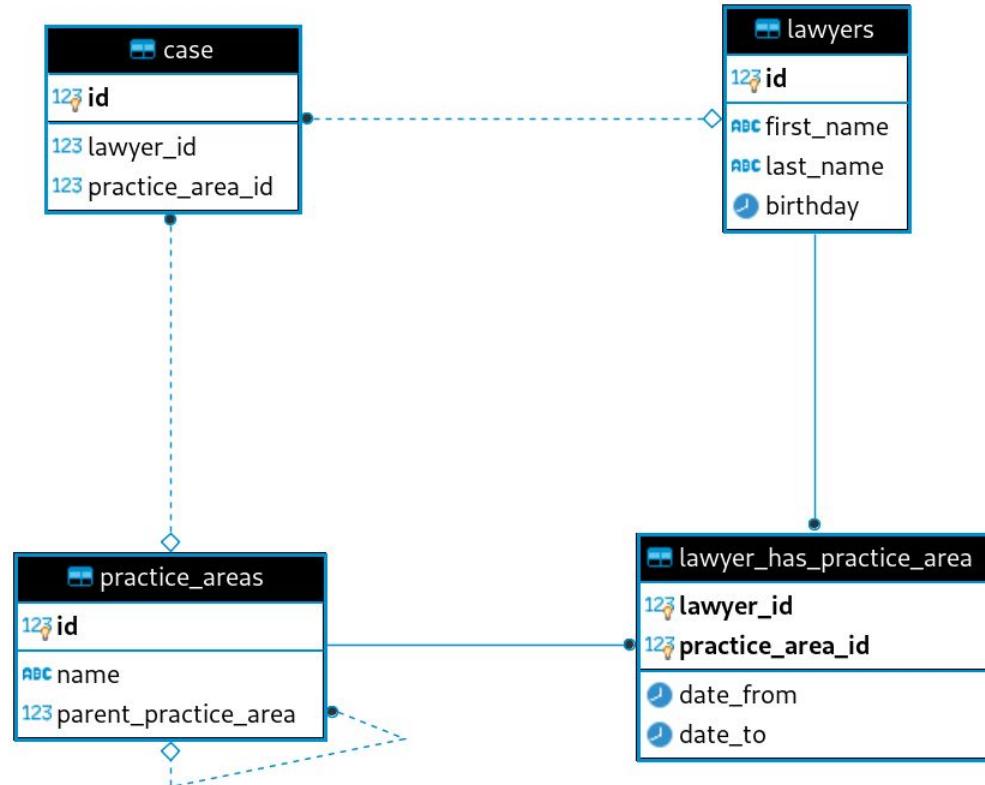


On-prem vs Cloud



*Web Application Architectures and Cloud*





	123 id	ABC first_name	ABC last_name	⌚ birthday
1	1	João	Vilaça	1998-06-30
2	2	Theon	Dupont	1978-03-06
3	3	Cayden	Luna	1984-12-07
4	4	Summer-Louise	Chen	1976-05-16
5	5	Torin	Vasquez	1978-03-06
6	6	Divine	Kumar	1984-12-07
7	7	Igor	Drew	1976-05-16
8	8	Teresa		
9	9	Joe		
10	10	Gaia		
	123 id	ABC name	123 parent_practice_area	
1	1	Finance Law	[NULL]	
2	2	Banking Law	1 ↗	
3	3	Comercial Law	1 ↗	
4	4	Internacional Law	1 ↗	
	123 lawyer_id	123 practice_area_id	⌚ date_from	⌚ date_to
1	1 ↗	1 ↗	2020-10-10	[NULL]
2	1 ↗	3 ↗	1990-01-01	[NULL]
3	2 ↗	1 ↗	1990-01-01	[NULL]
4	3 ↗	4 ↗	1990-01-01	[NULL]
5	4 ↗	4 ↗	1990-01-01	[NULL]
6	5 ↗	2 ↗	1990-01-01	[NULL]
7	6 ↗	3 ↗	1990-01-01	2000-01-01
8	6 ↗	4 ↗	2000-01-01	[NULL]

Table Rows

Data Storage

```
import psycopg2

connection = psycopg2.connect()

cursor = connection.cursor()
query = "select * from lawyers"

cursor.execute(query)
print("The number of lawyers: ", cursor.rowcount)

records = cursor.fetchall()

for row in records:
    print(row[1], row[2])
```

```
...  
query = """  
    select * from lawyers as l  
    inner join lawyer_has_practice_area as lp  
        on l.id = lp.lawyer_id  
    inner join practice_areas as p  
        on lp.practice_area_id = p.id  
"""  
  
cursor.execute(query)  
records = cursor.fetchall()  
  
for row in records:  
    if row[7] is None:  
        print(row[1], row[2], "practices", \  
              row[9], "since", row[6])
```

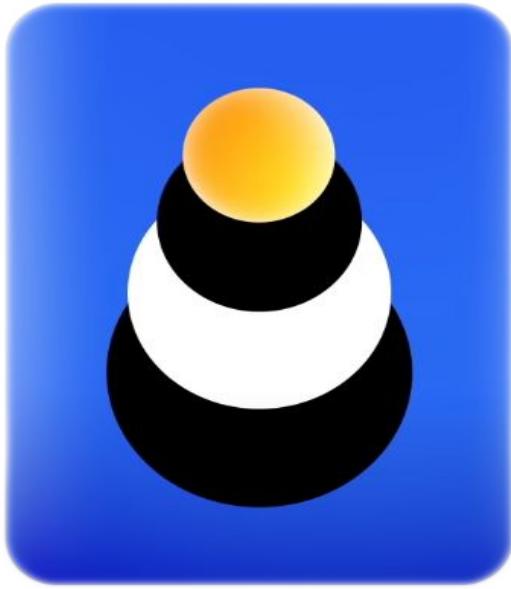
Privilege	Read and Write	Read Only	Write Only
Select	+	+	-
Insert	+	-	+
Update	+	-	+
Delete	+	-	+
Create	+	-	+
Drop	+	-	+
Alter	+	-	+
Index	+	-	+
Create Temporary Tables	+	-	+
Lock Tables	+	-	+
Create View	+	-	+
Show View	+	+	-



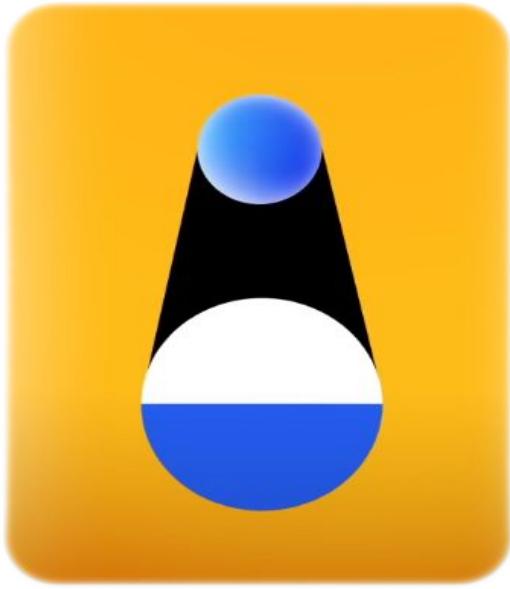


IoT

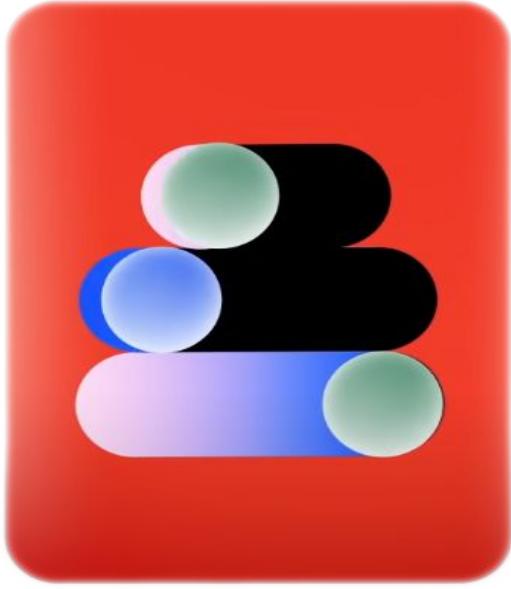




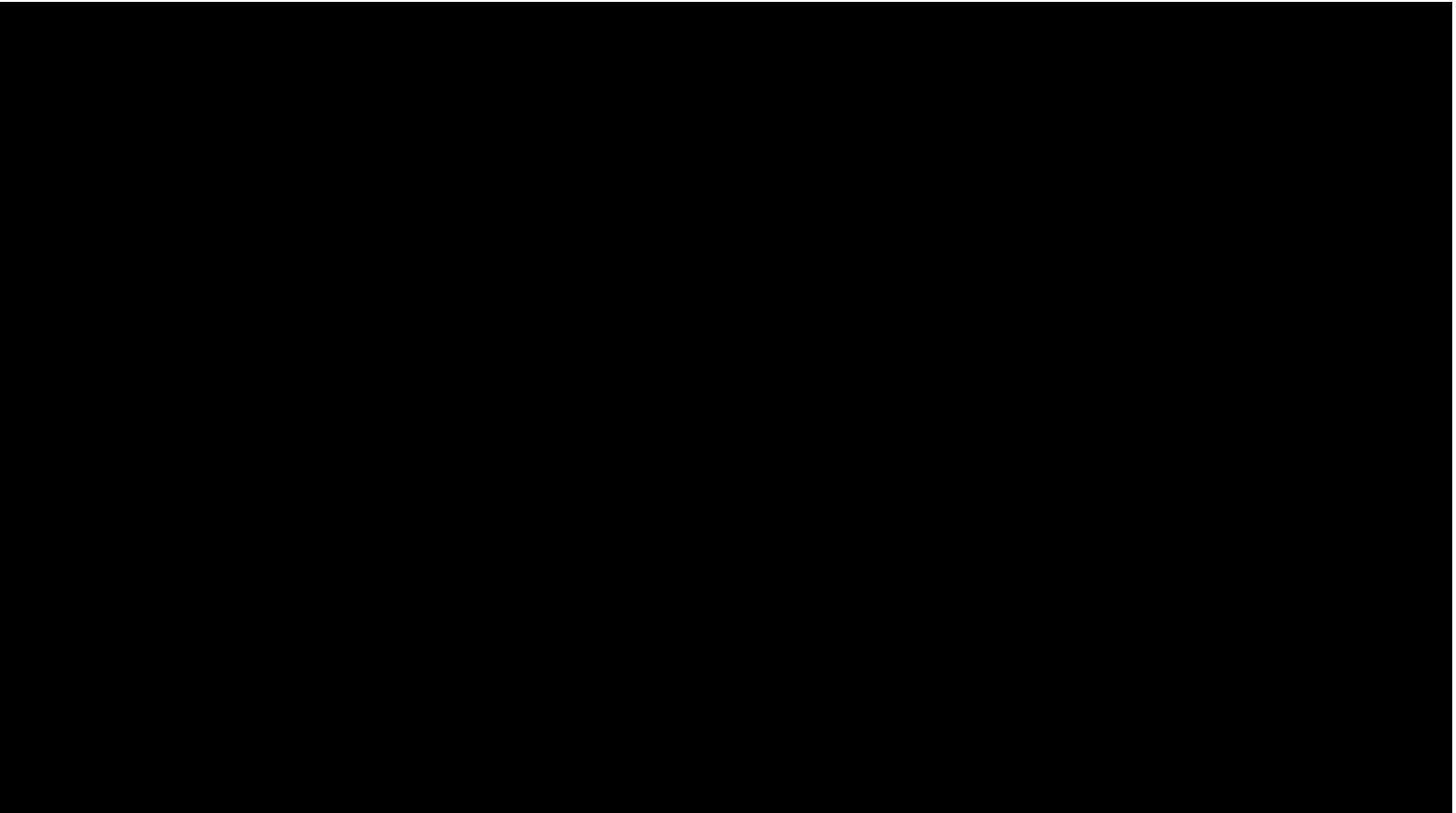
Supervised Learning



Unsupervised Learning



Reinforcement



## Como os seus anúncios são personalizados

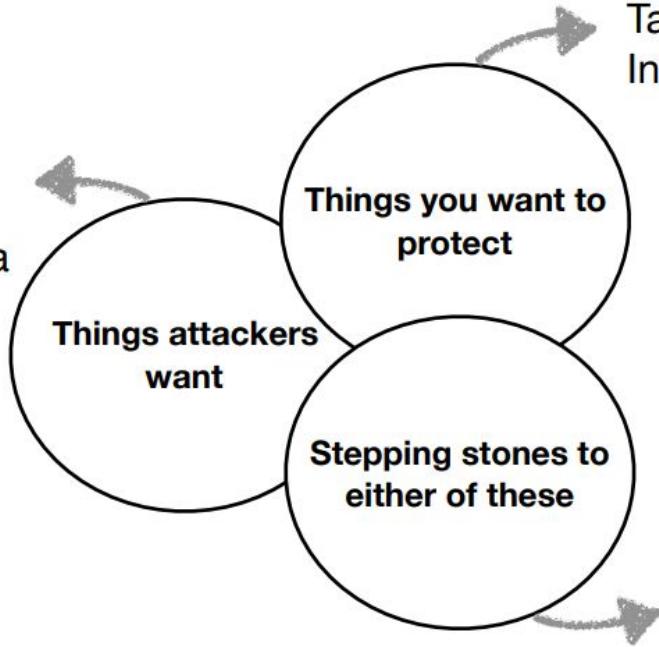
Os anúncios baseiam-se nas informações pessoais que adicionou à sua Conta Google, nos dados de anunciantes que têm parceria com a Google e na estimativa que a Google faz dos seus interesses.

Escolha um fator para saber mais ou atualizar as suas preferências. [Saiba como controlar os anúncios que vê](#)

-  18 – 24 anos
-  Masculino
-  Idioma: português e mais 1
-  Ações e Obrigações
-  Alimentos Orgânicos e Naturais
-  Alojamento na Web e registo de domínios
-  Altifalantes
-  Alugueres de automóveis
-  Análise e estatísticas da Web
-  Análises de produtos e comparações de preços
-  Animais de estimação
-  Apoio técnico e reparação
-  Apple iOS
-  Apps Web e ferramentas on-line
-  Armazenamento na nuvem
-  Ascendência e genealogia



User passwords or keys  
Credit card numbers  
Confidential business data

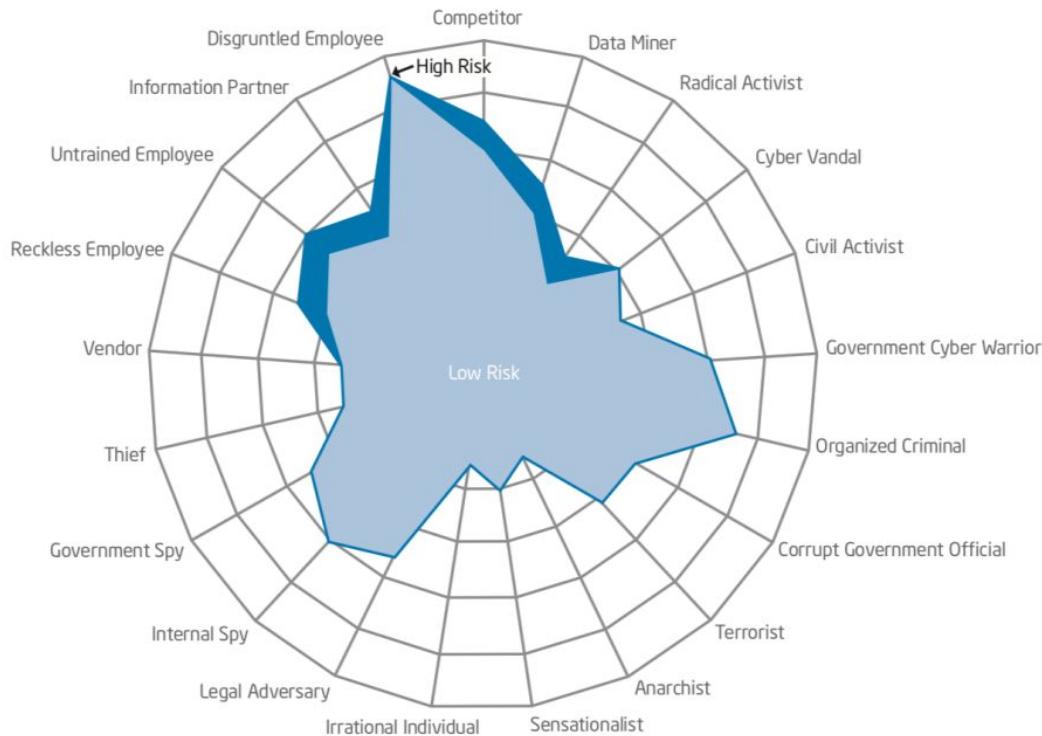


Tangible things attackers want  
Intangible assets  
- reputation  
- things that matters to customers

Firewall  
VPN Service  
Authentication system

## Hypothetical Example of Risk Comparison for Threat Agent Profiles

Project Risk  
Default Risk



Source: Prioritizing information security risks with threat agent risk assessment (TARA), Intel 2009

# CVE-2021-28133 Detail

## UNDERGOING ANALYSIS

This vulnerability is currently undergoing analysis and not all information is available. Please check back soon to view the completed vulnerability summary.

## Description

Zoom through 5.5.4 sometimes allows attackers to read private information on a participant's screen, even though the participant never attempted to share the private part of their screen. When a user shares a specific application window via the Share Screen functionality, other meeting participants can briefly see contents of other application windows that were explicitly not shared. The contents of these other windows can (for instance) be seen for a short period of time when they overlay the shared window and get into focus. (An attacker can, of course, use a separate screen-recorder application, unsupported by Zoom, to save all such contents for later replays and analysis.) Depending on the unintentionally shared data, this short exposure of screen contents may be a more or less severe security issue.

## Severity

CVSS Version 3.x

CVSS Version 2.0

### CVSS 3.x Severity and Metrics:



NIST: NVD

Base Score: N/A

NVD score not yet provided.

*NVD Analysts use publicly available information to associate vector strings and CVSS scores. We also display any CVSS information provided within the CVE List from the CNA.*

*Note: NVD Analysts have not published a CVSS score for this CVE at this time. NVD Analysts use publicly available information at the time of analysis to associate CVSS vector strings.*

## QUICK INFO

### CVE Dictionary Entry:

CVE-2021-28133

### NVD Published Date:

03/18/2021

### NVD Last Modified:

03/19/2021

### Source:

MITRE

# CVE-2021-27070 Detail

## UNDERGOING REANALYSIS

This vulnerability has been modified and is currently undergoing reanalysis. Please check back soon to view the updated vulnerability summary.

## Current Description

Windows 10 Update Assistant Elevation of Privilege Vulnerability

[- Hide Analysis Description](#)

## Analysis Description

Windows 10 Update Assistant Elevation of Privilege Vulnerability

### Severity

CVSS Version 3.x

CVSS Version 2.0

#### CVSS 3.x Severity and Metrics:



NIST: NVD

Base Score: 7.8 HIGH

Vector: CVSS:3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:H/I:H/A:H

*NVD Analysts use publicly available information to associate vector strings and CVSS scores. We have provided the CVE List from the CNA.*

*Note: NVD Analysts have published a CVSS score for this CVE based on publicly available information. We have provided the CVE List from the CNA.*

#### CVSS v3.1 Severity and Metrics:

Base Score: 7.8 HIGH

Vector: AV:L/AC:L/PR:L/UI:N/S:U/C:H/I:H/A:H

Impact Score: 5.9

Exploitability Score: 1.8

Attack Vector (AV): Local

Attack Complexity (AC): Low

Privileges Required (PR): Low

User Interaction (UI): None

Scope (S): Unchanged

Confidentiality (C): High

Integrity (I): High

Availability (A): High

## References to Advisories, Solutions, and Tools

By selecting these links, you will be leaving NIST webspace. We have provided these links because they may be useful to you. No inferences should be drawn on accuracy or completeness of these pages. There may be other web sites that are more appropriate for your purpose. NIST does not necessarily endorse the views expressed, or concur with the facts presented on these sites. Further, NIST does not endorse any commercial products that may be mentioned on

## QUICK INFO

### CVE Dictionary Entry:

CVE-2021-27070

### NVD Published Date:

03/11/2021

### NVD Last Modified:

03/17/2021

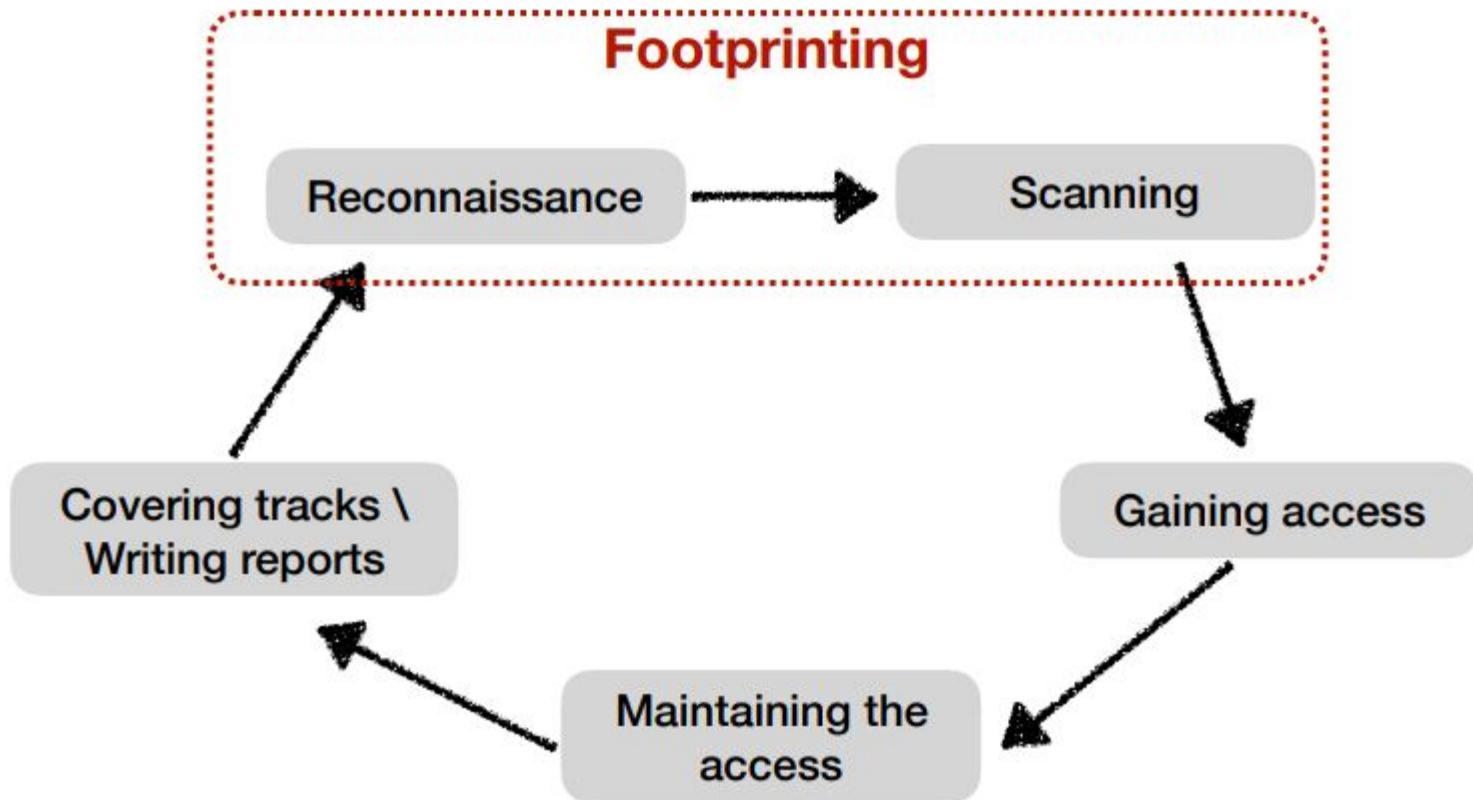
### Source:

Microsoft Corporation

# STRIDE

<i>Threat</i>	<i>Property Attacked</i>
Spoofing	Authentication
Tampering	Integrity
Repudiation	Non-repudiation
Information Disclosure	Confidentiality
Denial of Service	Availability
Elevation of Privilege	Authorization

## Footprinting



## Event history (1050+) [Info](#)

[Clear](#) [Download](#)

Event history shows you the last 90 days of management events.

AWS access key

Enter an AWS access key

30m

1h

3h

12h

Custom [Edit](#)

< 1

<input type="checkbox"/>	Event name	Event time	User name	Event source	Resource type
<input type="checkbox"/>	CreateTags	March 16, 2021, 14:51:27 (UTC+...)		ec2.amazonaws.com	-
<input type="checkbox"/>	SharedSnapshotVolumeCreated	March 16, 2021, 14:51:03 (UTC+...)		ec2.amazonaws.com	-
<input type="checkbox"/>	RunInstances	March 16, 2021, 14:51:00 (UTC+...)	InstanceLaunch	ec2.amazonaws.com	AWS::EC2::VPC, AWS::EC2::Ami, AWS::IA...
<input type="checkbox"/>	TerminateInstances	March 16, 2021, 14:49:44 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::Instance
<input type="checkbox"/>	AuthorizeSecurityGroupEgress	March 16, 2021, 14:49:18 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	RevokeSecurityGroupEgress	March 16, 2021, 14:49:18 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	SharedSnapshotVolumeCreated	March 16, 2021, 14:47:39 (UTC+...)		ec2.amazonaws.com	-
<input type="checkbox"/>	RunInstances	March 16, 2021, 14:47:36 (UTC+...)	InstanceLaunch	ec2.amazonaws.com	AWS::EC2::VPC, AWS::EC2::Ami, AWS::IA...
<input type="checkbox"/>	AuthorizeSecurityGroupEgress	March 16, 2021, 14:45:31 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	RevokeSecurityGroupEgress	March 16, 2021, 14:45:30 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	AuthorizeSecurityGroupEgress	March 16, 2021, 14:45:15 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	RevokeSecurityGroupEgress	March 16, 2021, 14:45:15 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	TerminateInstances	March 16, 2021, 14:44:51 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::Instance
<input type="checkbox"/>	RevokeSecurityGroupEgress	March 16, 2021, 14:43:21 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	AuthorizeSecurityGroupEgress	March 16, 2021, 14:43:21 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	AuthorizeSecurityGroupEgress	March 16, 2021, 14:43:01 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup
<input type="checkbox"/>	RevokeSecurityGroupEgress	March 16, 2021, 14:43:01 (UTC+...)	machadovilaca	ec2.amazonaws.com	AWS::EC2::SecurityGroup

# Which operations should I log?

# AS MANY AS POSSIBLE!

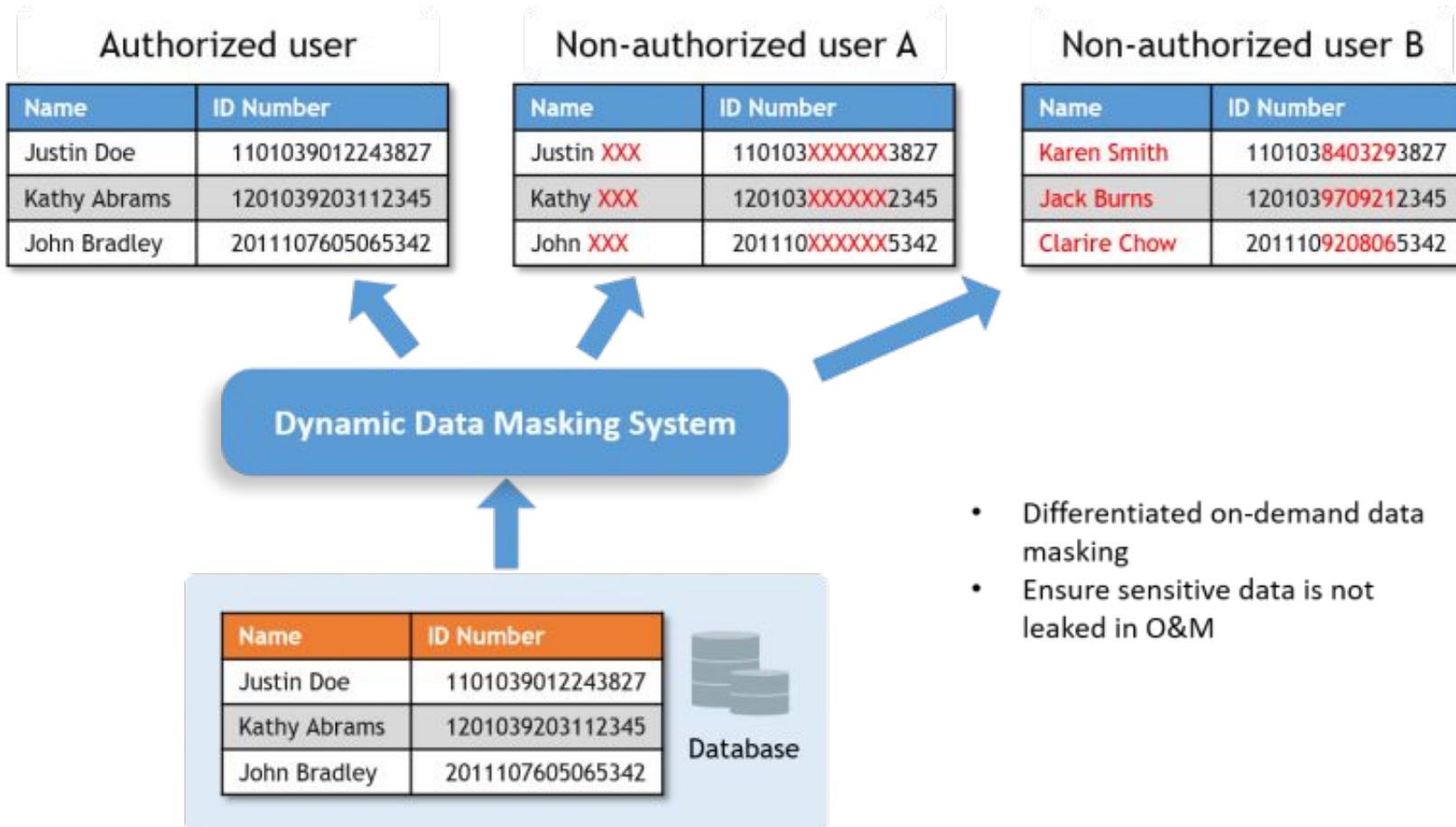


## Seagate Hard Drive Prices By Size

DRIVE SIZE	MODEL	PRICE	COST/GB
1 TB	ST1000DM010	\$49.99	\$0.050
2 TB	ST2000DM006	\$66.99	\$0.033
3 TB	ST3000DM008	\$83.72	\$0.028
4 TB	ST4000DM005	\$99.99	\$0.025
6 TB	ST6000DM004	\$240.00	\$0.040
8 TB	ST8000DM005	\$307.34	\$0.038

1 record =~ 500 bytes

1 TB =~ 2B records



- Differentiated on-demand data masking
- Ensure sensitive data is not leaked in O&M



123 213

admin

-- MAIN

Dashboard

Cursos

Mini Curso de Stocks

Curso de Crypto

Mantendo o titular da respetiva conta segredo quando à sua Address, muito dificilmente poderá um terceiro identificar aquela conta como pertencente a determinado indivíduo, sendo por essa razão que se afirma e se gerou a convicção generalizada de estarmos perante um sistema que permite transações anónimas.

**Criptografia** - Uma das grandes mais-valias funcionais do sistema da Bitcoin reside no método utilizado para codificar todo o seu funcionamento.

Criptografia significa "escrita escondida" e corresponde a um conjunto de técnicas e princípios que promovem uma comunicação segura na presença de terceiros. No fundo, a criptologia constrói e analisa protocolos que impedem pessoas ou entidades alheias de conseguirem ler mensagens que não lhes estão destinadas.

O sistema da Bitcoin utiliza métodos de criptografia poderosos que contribuem para assegurar que ninguém poderá aceder e movimentar unidades de Bitcoin depositadas em contas que não lhes pertencem, sem que para isso recebam, do titular da conta, a devida autorização através da concessão de um método privado de acesso à conta.

Todas estas características, utilizadas e demonstradas de forma pioneira no sistema Bitcoin, contribuiram para que a Bitcoin alcançasse o estatuto de primeiro e mais significativo – em market cap (valorização de mercado) – ativo virtual criptografado.

#### A Blockchain

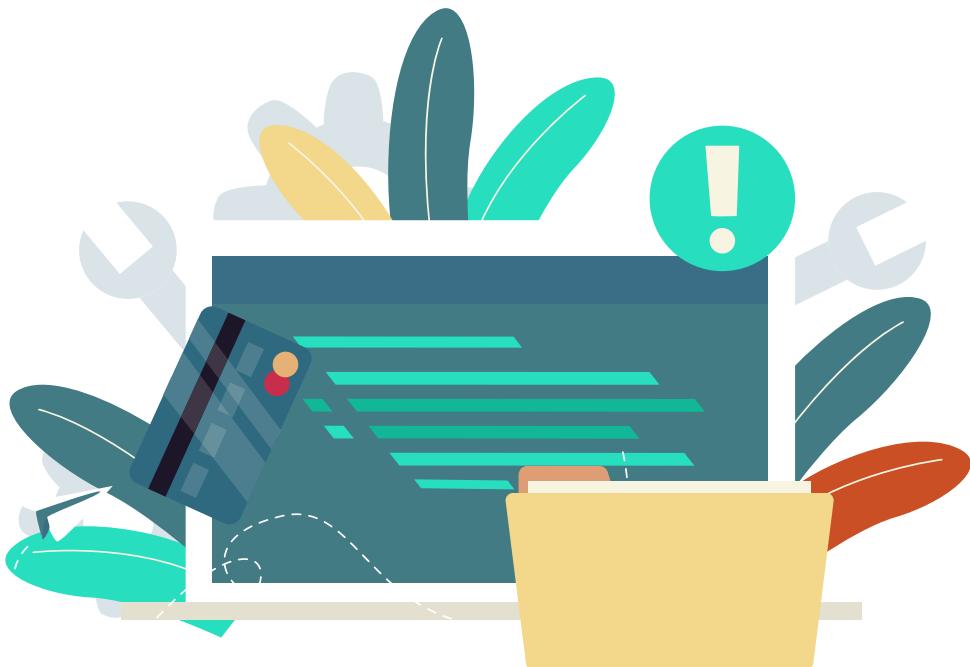


A Blockchain – já referida anteriormente – corresponde a um método de verificação e registo de transferências, também apelidado de livro-razão de contabilidade.

Este método permite um registo detalhado de todas as transferências efetuadas desde a criação da Bitcoin, atribuindo a cada registo de transferência uma ordem cronológica de proveniência e destino, gerando certeza quanto à validade dos fundos e prevenindo a duplicação de unidades de Bitcoin. A informação criada pela Blockchain é pública e é transmitida de forma automática a todos os participantes da rede, de forma transparente e descentralizada, contendo, em cada transferência, referência às public key das respetivas contas envolvidas, quer do transmitente, quer do destinatário e receptor.

O método de criptografia empregue pela Blockchain possibilita que uma transação seja executada com segurança, através da interseção de uma public key com uma private key.

Como vimos anteriormente, a address poderá ser equiparada ao conceito de IBAN, onde se indica apenas a "localização" de uma conta no sistema da Blockchain, não permitindo o seu controlo para quem conheça essa mesma informação.



# Digital Literacy Workshop

Law in Tech Companies