

Cybersecurity for Future Security Nerds

Activity Sheet

Activity #1: Match the word in column 1 with its definition in column 2.

Column 1	Column 2
(1) authorization	Keep programs and data as they should be, and keep track of what's happening
(2) hashing	Process hackers use to gain someone's trust to gain access to a system
(3) integrity	Software tool to detect programs that could harm a computer system
(4) cybersecurity	Method to generate a fingerprint of data to detect tampering or damage
(5) DoS	How data is encrypted when stored on your mobile phone
(6) at rest	System to restrict and monitor flow of traffic on a network
(7) auditing	Attack intended to take down a system or service
(8) human error	Solution to have 2 or more instances of a system running in the event of a problem
(9) encryption	When two different files generate the same hash value
(10) pentest	Attack that tricks someone into providing credentials, personal info, or access
(11) social engineering	Attack made possible by people reusing the same password on different websites
(12) authentication	Process to track activity on a system
(13) credential stuffing	Practice to ensure secure coding practices are introduced early in software development process
(14) availability	Proving identity
(15) phishing	Scrambling messages to prevent from being read by unauthorized people and programs
(16) anti-malware	How data is encrypted when you connect to a HTTPS website
(17) collision	Ensure systems are accessible and working
(18) public key	Process used by an ethical hacker to validate security of a system or organization
(19) confidentiality	Encryption technology making website certificates possible
(20) firewall	Restrict access to appropriate people and programs
(21) HA	Validating permission to access a resource
(22) shifting left	Cause of failure of even the most secure environment
(23) in transit	Ensures the confidentiality, integrity, and availability of a computer system.

Activity #2: Decode encrypted messages

Use the decoder sheet to decode a couple of the secret messages.

Activity #3: Online Activities

Check out the Time-to-Crack Password Simulator and Hash Algorithm labs at <https://cybernerds.infrastructuresquad.com>

DECODING TABLE

C	P
-	-
0	Q
1	W
2	8
3	C
4	M
5	N
6	5
7	H
8	L
9	D
A	U
B	S
C	I
D	Y
E	X
F	G
G	3
H	P
I	T
J	J
K	E
L	1
M	4
N	7
O	F
P	0
Q	Z
R	R
S	6
T	0
U	A
V	B
W	V
X	2
Y	9
Z	K

MESSAGES

3DVKRBK3ARCID CB 3TT8
 C 8TWK BT8WC5F HRTV8K4B
 I7CB FAD 8CZKB T89 4TWCKB
 HRTIK3I DTARBK80 T58C5K
 9T 5TI FKI H7CB7K9
 RKABC5F HUBB1TR9B CB VU9
 1UI37 TAI OTR 9UWK

DECODING TABLE

C	P
-	-
0	Z
1	N
2	V
3	A
4	7
5	K
6	2
7	3
8	P
9	D
A	X
B	W
C	F
D	1
E	E
F	I
G	Q
H	4
I	G
J	L
K	C
L	M
M	8
N	S
O	H
P	T
Q	R
R	B
S	Y
T	0
U	J
V	5
W	0
X	U
Y	6
Z	9

MESSAGES

KSREQNEKXQFPS FN KwwJ
 F JW2E NWJ2F1I 8QWRJELN
 POFN IXS JF5EN WJ9 LW2FEN
 8QWPEKP SWXQNEJC W1JF1E
 9W 1WP IEP 80FN0E9
 QEXNF1I 83NNBWQ9N FN R39
 B3PK0 WXP CWQ 932E