Security, privacy and data integrity

A-Level Computer Science · Vocabulary in context

Word	Example
security /sɪˈkjʊərɪti/	Passwords help keep the data's **security**.
privacy /ˈprɪvəsi/	**Privacy** means people control who sees their information.
integrity /ɪnˈtegrɪti/	Data **integrity** means the data is correct and complete.
unauthorised /ʌnˈɔːθəraɪzd/	**Unauthorised** users must not see the data.
validation /ˌvælɪˈdeɪʃn/	**Validation** checks that an age is between 0 and 120. 0 120
verification /ˌverɪfɪˈkeɪʃn/	**Verification** checks that the data was typed in correctly.
malware /ˈmælweə/	A virus is a kind of **malware**.
ransomware /ˈrænsəmweə/	**Ransomware** locks your files until you pay.
networks /ˈnetwɜːks/	Hackers attack **networks** to steal data.
man-in-the-middle /mæn ɪnðə ˈmɪdl/	In a **man-in-the-middle** attack, someone reads messages between two people.
virus /ˈvaɪrəs/	A **virus** copies itself into other files.
worm /wɜːm/	A **worm** spreads by itself across a network.
Trojan horse /ˈtrəʊdʒn hɔːs/	A **Trojan horse** looks like a useful program but is harmful.

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spyware /ˈspaɪweə/	**Spyware** watches what you type.
adware /ˈædweə/	**Adware** shows unwanted adverts.
phishing /ˈfɪʃɪŋ/	A **phishing** email asks for your password.
pharming /ˈfɑːmɪŋ/	**Pharming** sends you to a fake website.
social engineering /ˈsəʊʃl ˌendʒɪˈnɪərɪŋ/	**Social engineering** tricks people into giving away secrets.
hacking /ˈhækɪŋ/	**Hacking** means getting into a computer without permission.
hackers /ˈhækəz/	**Hackers** tried to break into the school's network.
denial of service /dɪˈnaɪəl ɒv ˈsɜːvɪs/	A **denial of service** attack floods a website with requests.
eavesdropping /ˈiːvzdrɒpɪŋ/	**Eavesdropping** means secretly listening to messages.
firewall /ˈfaɪəwɔːl/	A **firewall** blocks unsafe data.
two-factor authentication /tuː ˈfæktə ɔːˌθentɪˈkeɪʃn/	**Two-factor authentication** asks for a password and a code from your phone.
authentication /ɔːˌθentɪˈkeɪʃn/	A password is a kind of **authentication**.
encryption /enˈkrɪpʃn/	**Encryption** makes the message unreadable to others.
backup /ˈbækʌp/	Make a **backup** of your work every day.
user accounts /ˈjuːzə əˈkaʊnts/	The school system has **user accounts** for all students.

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Word	Example
audit logs /ˈɔːdɪt lɒgz/	**Audit logs** record who opened each file.
ciphertext /ˈsaɪfətekst/	The encrypted message is **ciphertext**.
access rights /ˈækses raɪts/	Students have **access rights** to read the file, but not change it.
anti-spyware /ˈænti ˈspaɪweə/	**Anti-spyware** finds and removes spyware.
biometrics /ˌbaɪəʊˈmetrɪks/	A fingerprint scanner uses **biometrics**.
VPN /ˌviː piː ˈen/	A **VPN** keeps your connection private.
digital signatures /ˈdɪdʒɪtl ˈsɪgnɪtʃəz/	**Digital signatures** show who sent a message.
private key /ˈpraɪvət kiː/	Keep your **private key** secret.
public key /ˈpʌblɪk kiː/	Anyone can use your **public key**.
authorisation /ˌɔːθəraɪˈzeɪʃn/	**Authorisation** decides what a user is allowed to do.
least-privilege /liːst ˈprɪvɪlɪdʒ/	Under **least-privilege**, users get only the access they need.
plaintext /ˈpleɪntekst/	The message before encryption is **plaintext**.
Symmetric encryption /sɪˈmetrɪk enˈkrɪpʃn/	**Symmetric encryption** uses the same key to lock and unlock.
asymmetric encryption /ˌeɪsɪˈmetrɪk enˈkrɪpʃn/	**Asymmetric encryption** uses a public key and a private key.

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Word	Example
access control /ˈækses kənˈtrəʊl/	**Access control** decides who can open a file.
check digit /tʃek ˈdɪdʒɪt/	The last number in a barcode is a **check digit**.
parity check /ˈpærɪti tʃek/	A **parity check** counts the number of 1s. 1
checksum /ˈtʃeksəm/	The **checksum** shows if the data changed on the way.
cyclic redundancy check /ˈsaɪklɪk rɪˈdʌndənsi tʃek/	A **cyclic redundancy check** finds errors in sent data.
parity block check /ˈpærɪti blɒk tʃek/	A **parity block check** can find which bit is wrong.

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