# Computer Science 2210/0478 (Notes) **Chapter: 5**



## **Topic: Security Threats Prevention**

#### There are several solutions that can help keep data safe from security threats. Here are some examples:

- 1. Access levels: Access levels control who has access to certain data or systems. By limiting access to only those who need it, the risk of data breaches and unauthorized access is reduced.
- 2. Anti-malware: Anti-malware software, including anti-virus and anti-spyware, can detect and remove malicious software from computer systems, helping to protect against viruses, spyware, and other types of malware.
- 3. Authentication: Authentication involves verifying the identity of a user before granting access to a system or data. Authentication methods include username and password, biometrics, and two-step verification, among others.
- 4. Automating software updates: Regularly updating software can help to prevent vulnerabilities from being exploited by attackers. By automating software updates, the latest security patches and fixes can be applied to systems automatically, reducing the risk of attacks.
- 5. Checking the spelling and tone of communications: Phishing attacks often use language that is designed to trick users into giving away sensitive information. By checking the spelling and tone of communications, users can identify suspicious messages and avoid falling victim to phishing scams.
- 6. Checking the URL attached to a link: Scammers often use fake links to trick users into visiting malicious websites. By checking the URL attached to a link, users can verify that it is legitimate and avoid clicking on potentially harmful links.
- 7. Firewalls: Firewalls are software or hardware-based systems that control incoming and outgoing network traffic based on the predefined rules or criteria. They can help to prevent unauthorized access to computer systems and protect against cyberattacks.
- 8. Privacy settings: Privacy settings allow users to control how their personal information is shared on websites and social media platforms. By setting privacy options appropriately, users can reduce the risk of their personal information being compromised.
- 9. Proxy servers: Proxy servers act as intermediaries between users and the internet, helping to protect against attacks by blocking malicious traffic and filtering out potentially harmful content.







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**10. Secure Socket Layer (SSL) security protocol**: SSL is a security protocol that encrypts data as it is transmitted over the internet, helping to protect against interception and tampering. SSL is commonly used to secure online transactions, such as online banking and e-commerce.

In summary, a range of solutions can be used to help keep data safe from security threats, including access levels, anti-malware software, authentication, automating software updates, checking the spelling and tone of communications, checking the URL attached to a link, firewalls, privacy settings, proxy servers, and the SSL security protocol. By implementing appropriate security measures, individuals and organizations can better protect themselves against cyberattacks and keep their data safe.











