

Possible threats to Data 1

By Mahinn Malik

Clarify the word 'threat'

A person or thing likely to cause damage or danger.

Identify the 6 threats to computer systems

Threats to computer systems come in many forms:

- *Opportunistic threats*
- *Computer viruses*
- *Other malware*
- *Phishing*
- *Accidental damage*

Opportunity threats

People who find an unattended computer that has been left logged in to a system may view, steal or damage information, programs or even hardware.

Computer viruses

These are small programs that can replicate themselves and spread from computer to computer. They are never beneficial, usually they will make some changes to the system they infect and, even if they do no real damage, they are undesirable. They arrive by attaching themselves to file or email messages.

Malware

Examples of malware include: computer worms (essentially a computer virus that does not need to attach itself to a file or message); Trojan horses, which appear as some benign program allowing a hacker full access to a system; spyware; adware; and various other nasties. Malware is never beneficial.

Phishing

This is a type of threat which attempts to gain access to passwords, financial details and other such privileged information. Often this is done by email messages pretending to come from trusted websites, instant messaging or social networks. Normally they try to divert you to a website which looks original and which asks for information about you.

Accidental damage

Accidental damage. This may be caused by a natural disaster (e.g. flooding), mischief or accidental mishap, and can result in losing all of a computer's data

Hackers

A person who uses computers to gain unauthorized access to data.

Why is it important to secure data?

Computer/technology systems are under continuous threat of attack and the threats are continuous and ever changing. All computers and systems are vulnerable to attack and it is impossible to provide 100% protection. An attack could result in some form of loss. Examples include:

- Organizations which trade online have to build up a reputation for being a secure organization with secure network access. If this reputation is damaged, potential customers might be put off, costing the business money.
- When an organization's secrets are spread to competitors or to the wider public, any particular advantage the organization has will be lost. An example is when an organization has been doing research on a new product, and the results of that research find their way to a competitor.
- Identity theft could cause problems with obtaining loans and other contractual agreements.
- Disclosure of information could cause legal problems. A company can be sued by its customers if it sells their personal information or fails to protect it properly. The obligations of organizations to protect customers' data are covered by the Data Protection Act (1998). Organizations that store people's personal information have to register with the Information Commissioner's Office (ICO) and must undertake to treat the information responsibly.

Describe two threats which can affect a business' data. 4 marks

Opportunist threats – people who find an unattended computer that has been left logged in to a system may view, steal or damage information, programs or even hardware.

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