CYBER CRIME

Cyber Crime

- What is a Crime?
  Theft, Assault, Fraud, Burglary.

- What is Cyber Crime?
  A crime carried out by using a computer or the internet.

- There are two types of Cyber Crime

Cyber Dependant
When a crime is committed using a computer, Internet or computer technology against a digital system

Cyber Enabled
A normal crime that is assisted by the use of technology

Examples of Cyber Crime

- Examples of Cyber Crime

    - Hacking / Unauthorised Access

    - Malware

    - Ransomware

    - Phishing

    - DDOS

    - Identity Theft

    - Cyber Bullying

Often Cyber Crime is a blend of more than one offence above

A long time ago….

- Cyber criminals use exploits in system to gain an advantage.

- Exploits have been around for a long time.

- One example victim was telephone systems.

- Free long distance calls through a series of sounds & whistles that tricked the system.

- How did they do it?
  Captain crunch whistle from a American cereal box.

A long time ago….

- 1970 - first computer virus named 'Creeper'

- 1971 - Whistles down a phone line

- 1973 - $2 million stolen in New York bank by employee

- 1982 - virus written as a joke by 15 year old

- 1989 - first large scale documented ransomware - distributed by floppy disk

- 1991 - Internet became publicly available

- 1999 - Melissa Virus - takes over email accounts. $80 million in damage

- 2003 - SQL Slammer worm becomes the fastest spreading worm in history. Infects 75,000 machines worldwide in 10 minutes.

- 2013 - Yahoo! Suffered a breach of over 3 Billion usernames / passwords

- 2017 - Wannacry ransomware - 1 day - over 230,000 computers in 150 countries.

Why people commit Cyber Crime

- Money

- Power

- Political reasons

- Steal Data

- Steal Secrets

- Just for the challenge!

Victims of Cyber Crime

- Anyone can be a victim of Cyber Crime

  - People: whether you are a young person who feels they are being bullied or harassed online or an older person or business who has been scammed out of money or important data.

  - Businesses

  - Countries

Effect of Cyber Crime

- Upset

- Disruption

- Financial

- Danger

Christmas 2014. DDOS attack on Sonys Playstation Network and Xbox live causes disruption to over 150 millions users worldwide.

It can cause loss of money to individuals and businesses. Carphonewarehouse were fined £400k for not securing data of employees and customers.

2 days before Christmas 2016, a region in the Ukraine found this out the hard-way when hackers remotely shut down part of the power grid, leaving almost a quarter of a million people with no power.

Forbes Website - A look at 5 Data Breaches in 2018

Consequences of Cyber Crime

- Visit from the Police or NCA

- Your devices / equipment seized

- You may be Interviewed or Arrested

- You may receive a criminal conviction resulting in a fine or prison sentence.

Computer Mis-use Act Offences

CMA 1 - Unauthorised access

CMA 2 - Unauthorised access to commit further offence

CMA 3 - Unauthorised access to impair computers function

CMA 3a - Making, supplying or obtaining articles for use in offence in S1, S3 or 3ZA

CMA 3za - Unauthorised acts causing, or creating risk of serious damage

NCA - Guide to CMA Offences

https://nationalcrimeagency.gov.uk/who-we-are/publications/75-guide-to-the-computer-misuse-act/file

https://www.cps.gov.uk/legal-guidance/computer-misuse

Maximum sentences range from 2 years to 14 years.

NCA - Cyber Choices Video

Click Here for Link to NCA Website

https://nationalcrimeagency.gov.uk/what-we-do/crime-threats/cyber-crime/cyber-crime-preventing-young-people-from-getting-involved
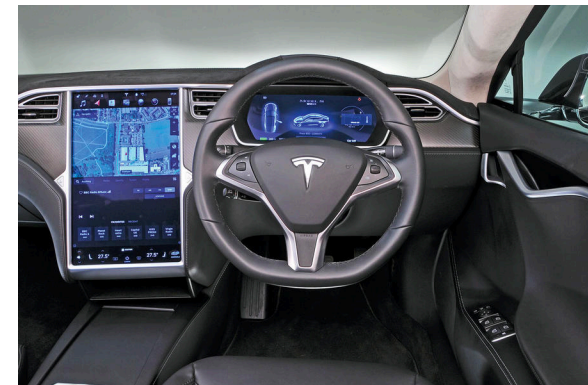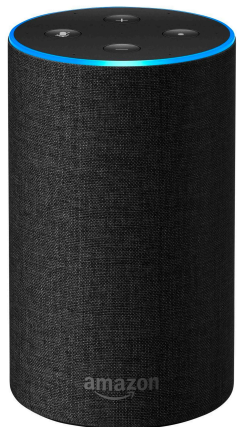
Investigating Cyber Crime

- Police and NCA work together to investigate all types of Cyber Crime

- Arrest people who commit Cyber Crime

- Gather evidence, Interview Suspects and present the evidence to the Crown Prosecution Service (CPS)

- Help victims recover from the effects of Cyber Crime

- Educate the public to become more aware of the dangers and how to spot them, so they don't become a victim.

Investigating Cyber Crime

- Cyber Crime investigations are often like normal investigations.

- Your digital footprint can reveal a lot about you - what information are you publishing online?

- Will this help a Cyber Criminal conduct a Cyber Crime against you?

- That information can reveal, who you are, who are your friends, where you have been, where you are going.

- Be careful what you post online. Even after you delete it, it may be still be available through websites such as https://archive.org/web/

Cyber Crime threats today

- ## We are still seeing the same threats.
  Individuals and business are are still not patching vulnerabilities in their their devices by upgrading to the latest versions of software and they are reusing simple passwords across multiple accounts.

- ## Cyber Criminals are becoming more organised.
  DDOS, Ransomware, Large Scale Data Breaches.

- ## Modern day items - IoT (Internet of Things)

- Smart Fridges, Robotic hoovers Smart Speakers and smart self driving vehicles may all have vulnerabilities that Cyber Criminals will try to exploit

Careers in Cyber Security

- Cyber Crime investigations

- Penetration Testing

- Cyber Security Education

- Cyber Incident Response

- Check out - https://www.cybersecuritychallenge.org.uk/careers

Internet Safety

- Passwords

  - Strong but easy to remember

  - Change the default password on devices

- WiFi - be careful what you do on public WiFi

- Don't click on unknown links or open unknown attachments

- Be careful who you chat to online and what you tell them

Account & Password Security

- Check if your accounts have been involved in a data breach - <u>provided by security expert Troy Hunt</u>

  https://haveibeenpwned.com/

- Password Security

  - <u>Password advice Website</u> - Get Safe Online

  - <u>Use a password manager</u> - NCSC

  - <u>Enable Two Factor Authentication</u> (2FA) - NCSC

  - <u>Two Factor Auth Website</u> - how to set up 2FA on your accounts

Useful Links

- Get Safe Online - https://www.getsafeonline.org/

- National Cyber Security Centre Website

- Action Fraud Website
  Prevention, Advice and Cyber Crime Reporting
  Twitter: https://twitter.com/actionfrauduk

- IWF - Internet Watch Foundation
  Report Criminal Content Online

- CEOP (Child exploitation & Online Protection)

- NCA - National Crime Agency

- Merseyside Police - Cyber Crime / Online Fraud Advice

Useful Links - Cyber Crime Events

- Cyber Security Challenge - Fast paced, online and Face-to-Face Cyber Challenges

- Cyber First Programme - NCSC

- Cyber First - Girls Competition

- CiSP - Cyber Security Information Sharing Partnership
  For Businesses - requires registration

If you take anything away from this Presentation

1. Make your Passwords secure

2. Use 2FA

[Top Tips for staying secure online](#)

Thank you listening

Any Questions?