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**GRADE 10**  
**CAMBRIDGE IGCSE**

# **COMPUTER SCIENCE**

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Lesson Objectives

**CS**

VAS

# STARTER: KNOWING WHAT YOU KNOW

Go to:

<https://joinmyquiz.com>

Code: \_\_\_\_\_

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2

# Effective use of the Internet

Parts of  
the  
internet.

Some  
technical  
details



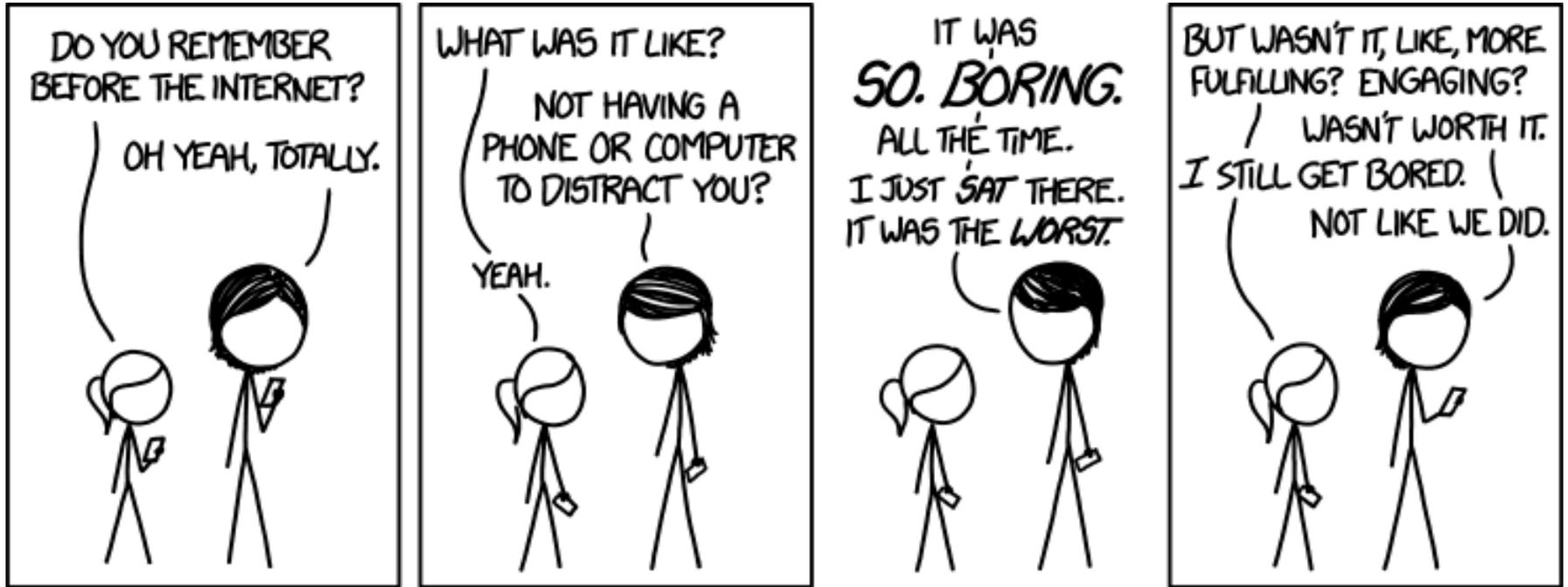
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# Before the internet



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# Starter – What am I?

A personal internet journal, often about a particular topic

blog

A website that is created and edited by anyone who wants to help

wiki

An online community of users who share photos and information

Social network

A set of rules used to send data on the internet:  
-----

http

The address of a website:  
URL

URL

A website used to find other websites on a particular topic

Search engine

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Effective use of the internet

# Lesson objectives (10.2)

Define general internet terms

Compare types of web sites

Explain how to search the internet

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- Define general internet terms
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# What is the internet?

- Worldwide collection of networks
- Allows users to:
  - Send email
  - Chat online (text / voice / video)
  - Transfer files
  - Browse the world wide web



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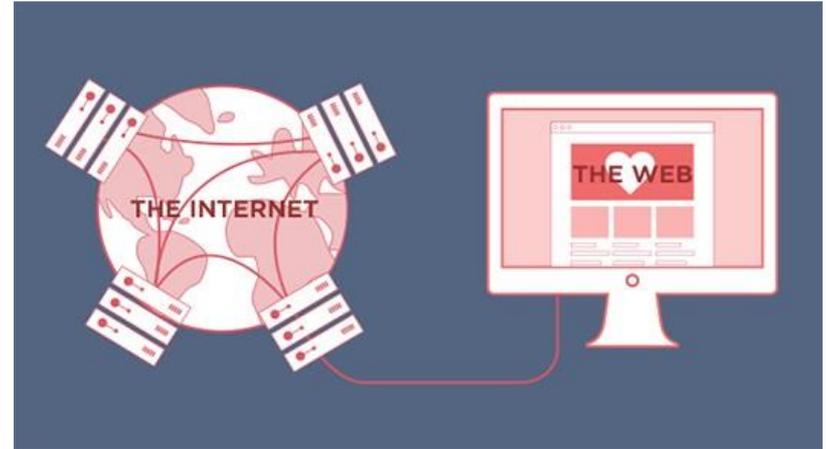
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# World Wide Web

- Part of the internet
- Accessed with web browser
- Made up of web pages
- Based on http
- Hypertext transfer protocol
- Uses internet technology to share information



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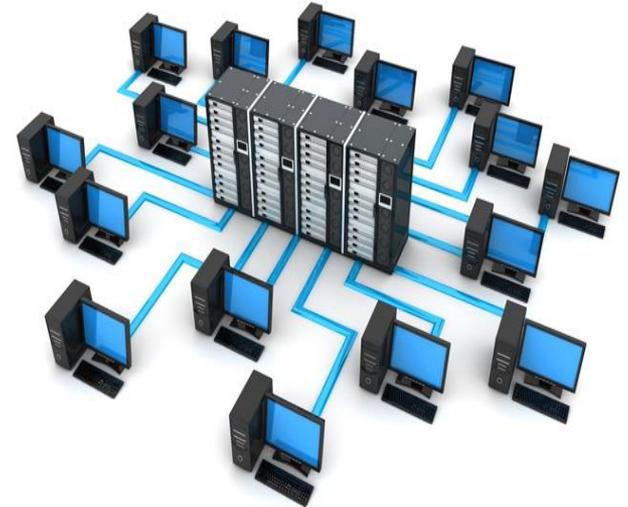
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# Intranets

Definition: a computer network that uses internet technology but is designed for one organization

- Only accessible to members of the organisation and...
- Certain outside users may be allowed
  - For example, clients of a company



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# Intranets

## Advantages over using the internet:

- + Safer since less chance of hacking or viruses
- + Can prevent external links
- + Ensure information is what the organization requires
- + Can include private / sensitive data
- + Better bandwidth
- + Extranets allow intranets to be extended outside the organisation



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# Intranet vs the internet

## Internet

- International network
- Topics of global or general interest
- Accessible globally if you have an ISP
- Public access



## Intranet

- Internal restricted network
- Information relevant to the organisation
- Requires username and password
- Private access

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# Cloud storage

Definition: storage of data on offsite servers

- Uses data redundancy:
  - The same data is stored on more than one server
  - In case of hardware failure / natural disaster etc
- Managed by a hosting company

Three types of system:

- Public
- Private
- Hybrid



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# Cloud storage

- Public: client and storage provider are different companies
  - E.g VAS using Microsoft One Drive storage
- Private: storage is dedicated to the company, behind a company firewall
- Hybrid: combination of public and private.
  - More sensitive data is stored privately
  - Other data is stored on a public provider



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# Cloud storage compared to local storage devices

## Advantages

- + Files accessible any time, from anywhere with internet access
- + No need for external storage hardware
- + Cloud providers deal with backup
- + Almost unlimited storage capacity

## Disadvantages

- Security risks
- Slow internet means slow access to files
- Costs for storage and upload / download bandwidth
- Failure of cloud provider would lead to data loss

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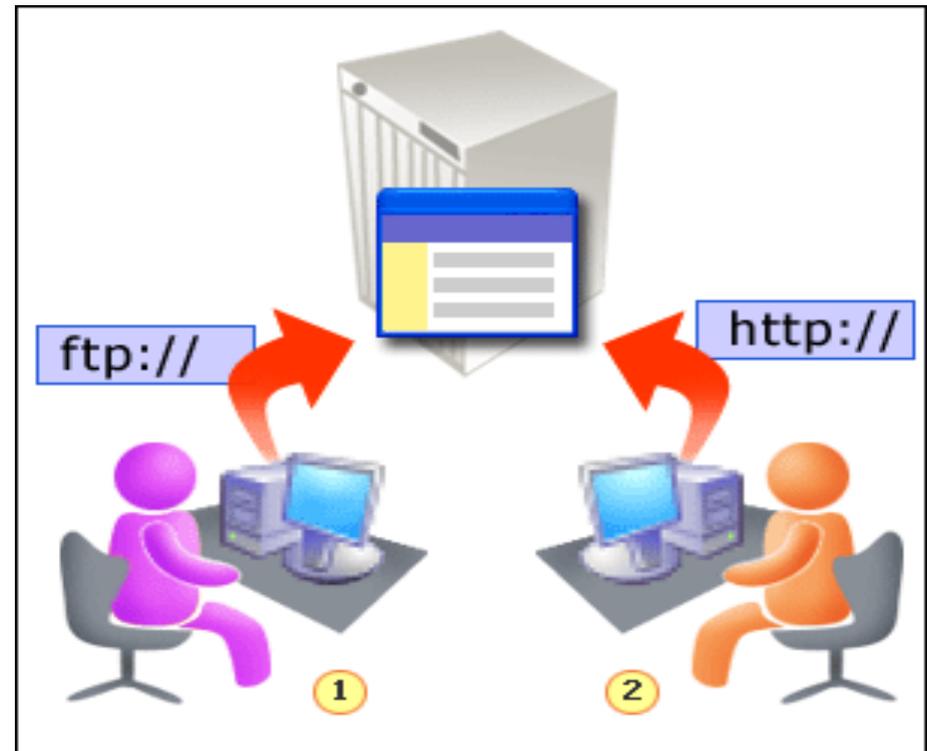
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# General Internet Terms

- Hypertext transfer protocol (http)
- Uniform resource locator (URL)
- File transfer protocol (ftp)
- Internet service provider (ISP)



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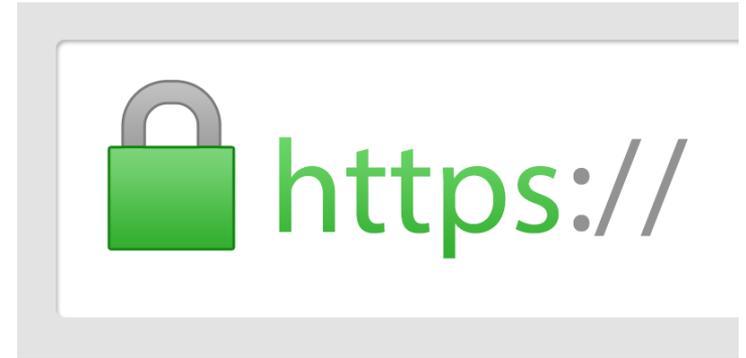
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# Hypertext transfer protocol (http)

- A set of rules for transferring information on the internet
- http:// tells the browser http is being used
- Often used with SSL or TLS for **security**
- This is called https (s for secure)



Http



Https

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# Uniform Resource Locators (URLs)

- Commonly called a web address
- Consist of:

**protocol:/** /website address /path /filename

- Example:

**http:/** /vas.edu.vn /GH /ICT.html

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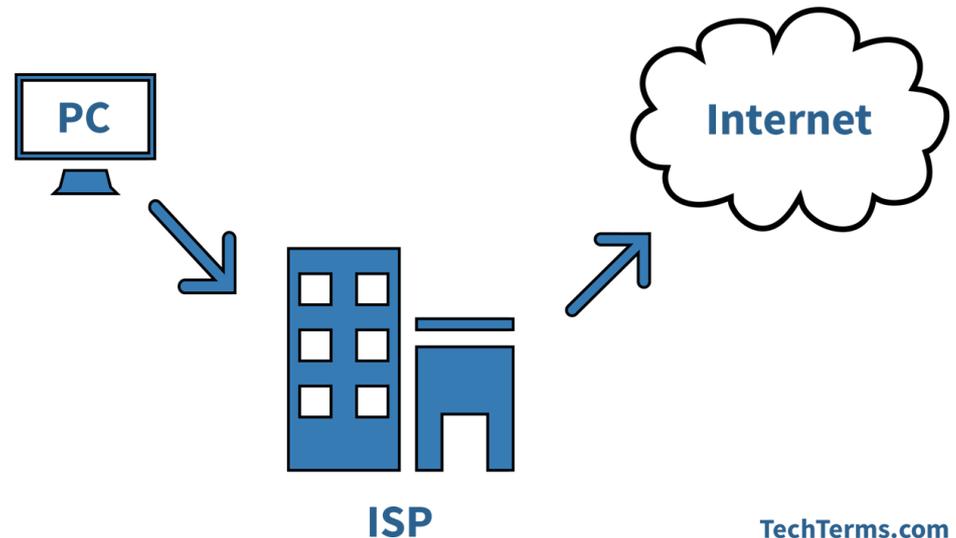
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# Internet Service Provider (ISP)

- A company that provides users access to the internet
- Users must register an account
- Receive a user name and password



TechTerms.com

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# Blogs

- Short for **web log**
- Usually personal journals with observations, news or recent activities
- Updated regularly
- Most recent posts first
- Normally public
- From a single author usually
- Microblog: social networking sites / tweets
- B-blog: business blog



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# Wiki

- Hawaiian word for “quick”
- Users can create and edit using a web browser
- Web pages with an edit button
  - Anyone can edit, delete or add content
  - Many authors collaborate to create them
  - Shows a record of changes
  - Very easy to edit
  - Large amounts of information can easily be shared



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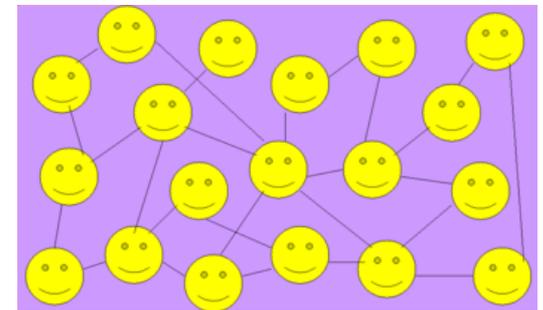
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# Social networking

- Online communities
- Share photos, videos and links
- Relationships with other users
- Features can include:
  - Private and public profiles
  - Text, audio and video chat
  - Creating pages with photos, information
  - “Friends”
  - Control access to personal data



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# Search for information on the internet

- Two main ways to find information:

## 1. Type in the URL

- If you know the exact site you want

## 2. Use a search engine

- If you don't know the URL or don't even know where to look

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# Using search engines - advantages

- + Up to date information
- + Huge amount of information
- + Fast and easy
- + Accessible anywhere with internet access
- + No need to buy books
- + Multimedia elements (videos, audio, animations)



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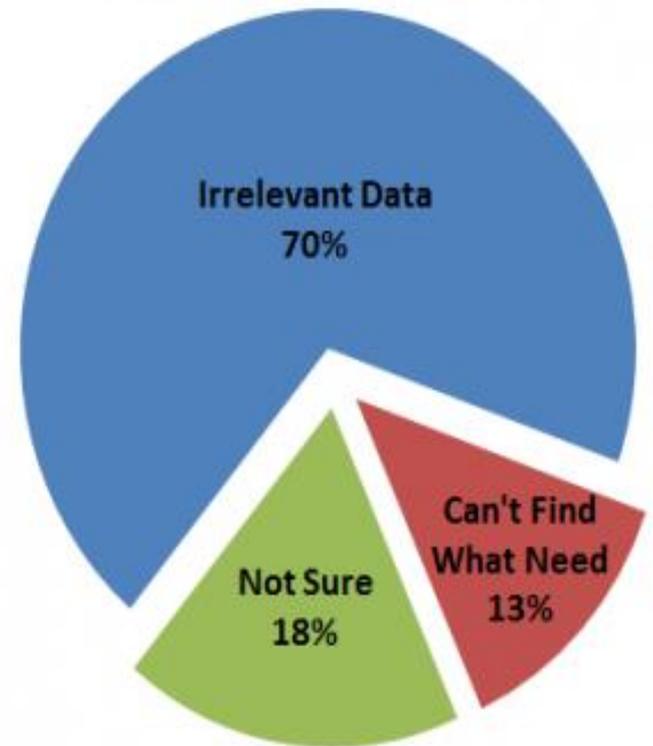
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# Using search engines - disadvantages

- Biased and incorrect information
- Inappropriate content on websites
- Easy to be distracted by games / social networks
- Information overload
- Very easy to copy and paste: copyright / plagiarism
- Research skills lost because search engines do all the work

Which Is The Bigger Search Engine Problem?



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# How to evaluate information on the internet?

- Is a commercial website biased towards that company or their advertisers?
- Is it an **.ac** , **.edu** or **.gov** website?
- Can you compare the information to books or other websites?
- Is it endorsed by responsible organisations?
- Does it have links to other reliable websites?
- Is it up to date?
- Does the author have good credentials?



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