

Online services 1

Online services are facilities that users can access over the internet and which allow data exchange and interaction. Here are four types of online services:

1

Communication

This service is about moving data between users.

Examples include:

- email
- instant messaging
- newsgroups
- social networking (e.g. Facebook)
- online conferencing
- blogs.

**2**

Real-time information

This service is used to get up-to-date information.

Examples include:

- train timetables
- news services
- traffic reports
- flight status updates
- weather.

**3**

Commerce

This service involves business – buying, selling and money services such as banking.

Examples include:

- internet banking
- online auction websites (e.g. eBay)
- retail sales (e.g. HMV, Tesco.com)
- publishing (e.g. Kindle on Amazon).

**4**

Government

This service involves public services, such as government bodies, like the DVLA and local council.

Examples include:

- online tax returns
- e-voting
- applications for services or grants
- revenue collection
- renewing car tax.



Worked example

Which **one** of the following is an online commerce service? (1 mark)

- A ☐ Train timetable B ☒ Online auction website
C ☐ Online tax return D ☐ E-voting website

Commerce means 'business' and business is about making money – so commerce services involve money in some way.



Now try this

Which **one** of the following is not a real-time online service? (1 mark)

- A ☐ Instant messaging B ☐ Pollen count website C ☐ Live bus timetable D ☐ News app

Remember to read questions carefully!

Online services 2

Here are five more online services:

1 Education

This service involves learning and training.

Examples include:

- online learning for learners (e.g. BBC Bitesize)
- online training.

2 Entertainment

This service involves using the internet for leisure and fun.

Examples include:

- online gaming, including multiplayer on consoles and portable devices



3 Virtual learning environment (VLE) (e.g. Moodle, Blackboard)

This service is a virtual classroom that allows teachers and learners to communicate with each other.

- radio players and music websites
- catch-up TV
- on-demand films.

4 Business

This service involves businesses using websites to make their business more efficient or to save money.

Examples include:

- video conferencing (e.g. Skype)

5 Download services

This service involves files which can be downloaded and saved onto the user's computer. These are LEGAL services.

Examples include downloads for:

- music and film
- software
- upgrades.



- collaborative working
- business networks.

Worked example

Which **one** of the following is an online business service? (1 mark)

- A ☐ Retail website
B ☐ VLE
C ☐ Online tax return
D ☒ Collaborative working

The online service for business is **not** about businesses using websites for selling. This would be considered Commerce.

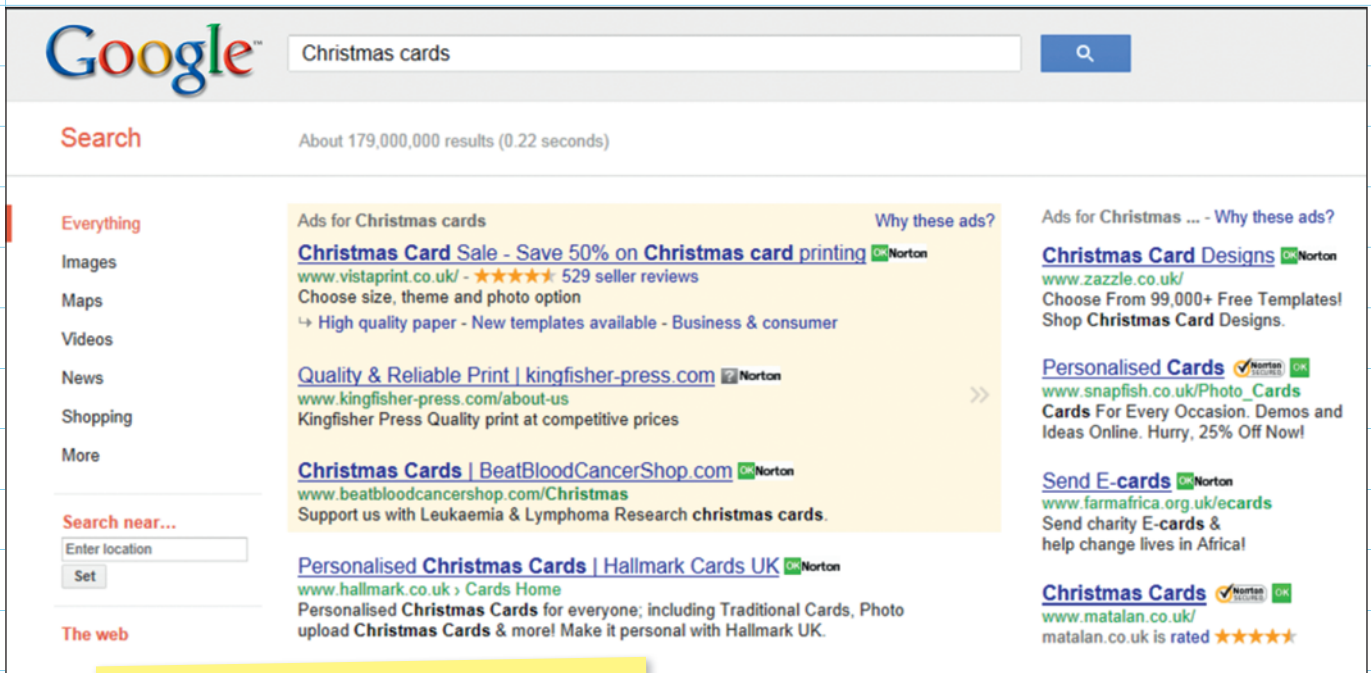
Now try this

Give **two** reasons why a user may use download services to acquire software instead of more traditional methods. (2 marks)

Had a look ☐Nearly there ☐Nailed it! ☐**UNIT 1**
Learning aim A

Online advertising

Online advertising is designed to capture and hold the attention of a user to promote a product or service. There are several methods which can be used.



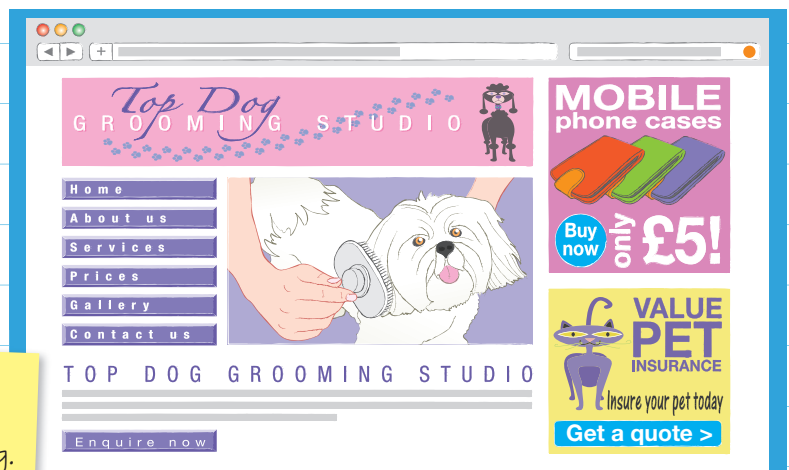
This shows a search engine results page with sponsored (paid for) links.

Google and the Google logo are registered trademarks of Google Inc., used with permission.

Pay-per-click advertising

A web page will host an advert for another organisation. If a user clicks on the advert, they are directed to the advertiser's website. The host will receive payment for each user who clicks on the advert. This is known as an affiliate model.

Banner/Pop-up adverts can be effective in catching users' attention but can also be annoying.



Worked example

Why might a website owner and an advertiser want to be involved with an affiliate model of online advertising? Give **one** reason for each.

(2 marks)

A website owner can host an advert and earn money every time a user clicks on it. An advertiser can put their advert on popular websites and potentially get more custom as more users will see their advert.

There are two marks – you can give two viewpoints: the host and the advertiser.

Now try this

Explain how banner and pop-up adverts aim to capture and retain the interest of web page users.

(2 marks)

Online documents – file compression

File compression makes files **SMALLER** so that they take up less space in computer memory.

Compression is also known as 'zipping' and is done using an algorithm. One file can be compressed or many files can be compressed into one.

File extensions for these include .zip, .rar, .7z and .dmg.

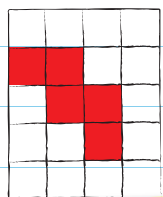
Each file extension is created using a different compression algorithm. Therefore, the user(s) compressing and expanding the file needs to use the same program.

Advantages of file compression

- ✓ Saving memory space on computers e.g. web server
- ✓ Files will upload and download more quickly
- ✓ Files will better fit restrictions, such as the attachment limit on email

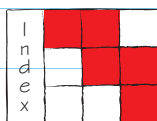
Index

When files are compressed, the last item in the compressed file is an **INDEX**. It contains the information needed to expand the files to their original size.

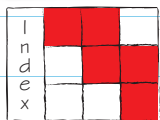


Original file

Apply
algorithm

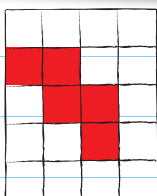


Compressed file



Compressed file

Use index
to expand



Original file

Worked example

Describe how an algorithm and index are used in file compression. **(2 marks)**

An algorithm is used in compression to make the file smaller. An index file is included when the algorithm is used and is part of the compressed file. When the file is expanded, the index holds the information to recreate the original file.

Now try this

Sharmeen is sending an email. She would like to attach 3 files which total 27 Mb. Her email's limit is 25 Mb but she does not want to send them separately.

- (a) Explain how file compression would help.
- (b) Describe the process of compressing and expanding the files. **(4 marks)**

Think carefully about all the information the question is asking for.

