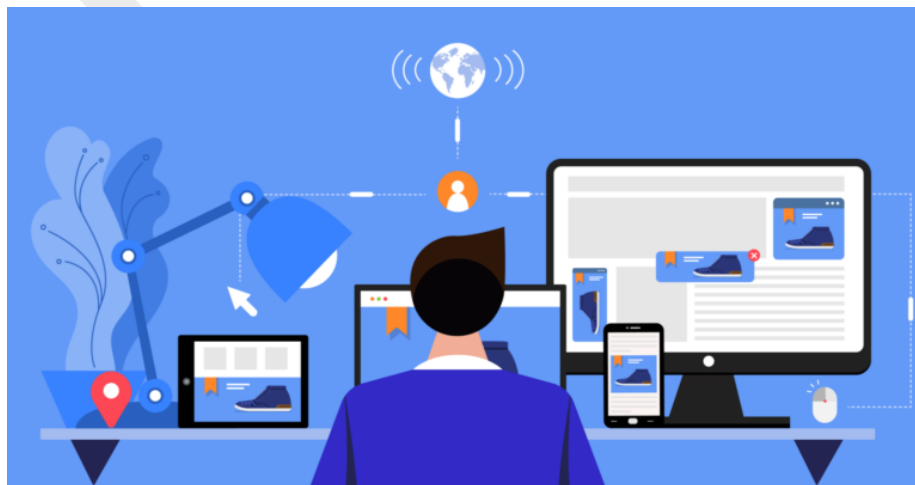# Edexcel

IGCSE - ICT

CODE: (4IT1)

Unit 04

Online goods and services

Types of services

Shopping sites

When a user shops online, they use a product catalogue. For each product, the catalogue can store:
an image of the product
■A product description
■The product's price
■Ratings by customers, shop staff or other people on review sites
■The popularity of the product
■A product code
■The number of items in stock.

▲ Figure 11.1 Products are often grouped into categories (shown here, highlighted in red)

When the customer is ready to pay for everything in the basket, they are directed to the checkout, where they can enter their delivery details and pay for the products in their basket. Sometimes, customers can use voucher codes at the checkout in order to receive a discount.
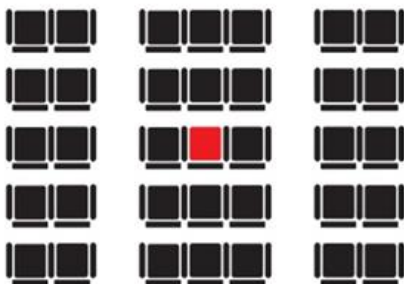
SUBJECT VOCABULARY

voucher code a code representing a specified amount of money that can be used on a shopping website to purchase goods or services

Booking system

When customers buy tickets using an online booking system, the tickets are often sent via email, so customers need to register an email address with the service when making purchases.

When customers buy tickets using an online booking system, the tickets are often sent via email, so customers need to register an email address with the service when making purchases. For some types of travel, companies use **e-tickets** that are linked to the customer's passport so that the customer can check in. Some airlines and train companies use QR codes (matrix codes) that can be scanned at airports or on trains.

▲ Figure 11.3 Some systems let you choose specific seats

▲ Figure 11.2 Travel documents can be loaded onto a smartphone, often using an app

SUBJECT VOCABULARY

e-ticket an electronic version of a paper ticket

Banks

Banks offer their customers many online services, including:
checking balances
■setting balance alerts
making payments and transfers
■ applying for loans and other financial products
managing alerts and notifications of payments and balance amounts
■ accessing customer service and help systems changing personal information.

Education and training providers

Online training courses allow learners to access:
■ Libraries of online journals and reference archives
■ Online support from teachers and other learners
■Learning and assessment materials.

This access is provided through virtual learning environments (VLES).

Gaming sites

Gaming sites are online applications that allow users to play games that are hosted on a remote server. Sometimes these games are multiplayer, so that players control different characters in the game and other players can see their actions in real time.

News and other information providers

Other information providers can provide real-time notifications about information such as:
■Weather
■ Sports
■ Stock markets
■Currency values.

▲ Figure 11.4 Once a user has subscribed to a service, they can be notified automatically, via an app, of any activity on that service

Action sites

Auction sites allow sellers to list items for sale for a certain period of time and allow buyers to offer money for these items. When the auction ends, the buyer who has offered the most money completes a checkout process similar to that used on shopping sites. For more information about shopping sites, see page 168. Most auction sites also allow sellers to list items for sale with a fixed price. Auction sites provide ratings for buyers. A buyer with a high rating has been rated by sellers for being reliable and paying on time. Sellers can choose to only accept offers from buyers with a high rating. If a buyer does not pay, then the seller can either try to sell the item again or sell it to the buyer who offered the second highest amount of money.

THE IMPACT ON LIFESTYLE AND BEHAVIOUR

The online availability of goods and services has many beneficial impacts on people's lifestyles and behaviour. However, it also has drawbacks.

Benefits of online goods and services

Access to online services changes people's lifestyles by giving them more time to do important things such as spending time with family, socialising with friends or working. The American writer Clay Shirky argues that the build- up of free time is a new resource provided to individuals that can be used productively to do the activities that they care about.

Online booking systems for rail travel allow customers to:
■avoid having to go to the station to buy a ticket
■avoid having to queue, saving time
■buy tickets in advance of their journey, which means that they only need to arrive at the station a few minutes before the train leaves
■be notified if there is a delay to their train using live travel information apps.

Online banking allows customers to:
■avoid travelling to the bank to check balances and transfer funds between accounts
■avoid carrying cash, which is safer for the individual.

Online learning services allow users to:
■avoid having to travel to colleges or universities
■ avoid having to move closer to colleges or universities, meaning that individuals do not have to move away from their family and friends.

Online information providers allow people to:
■ receive weather alerts or traffic advice while they are travelling
■be rerouted automatically based on information about traffic conditions ahead.

Drawbacks of online goods and services

enough to allow people to understand their full impact. However, people should consider the following potential negative impacts of online goods and services.

■The immediate availability of online services could make people less patient and more demanding of others.

■ People become more isolated as individuals and detached from their real- world communities, which could make us more detached from the needs of others.

■Some people constantly check their online communications, such as social networking sites, which means that they spend less time connecting with people face-to-face, which reduces their face-to-face communication skills.

■People's use of online services means that there is less need to memorise facts, so there is a negative impact on memory.

■ People are becoming accustomed to skim-reading online information, which makes them less likely to pay attention to details.

▼ Table 11.1 The benefits and drawbacks of online services on individuals' lifestyle and behaviour

BENEFITS	DRAWBACKS
More time can be spent with family and friends	More time is spent using online services
Safer lifestyle as there is no need to carry cash, which might put individuals at risk	Individuals can be inconvenienced if no connectivity is available
Individuals are more engaged with creative media like art, photography, videos and drama	Individuals may become less active because they can access services without having to move

THE IMPACT ON THE WAYS THAT ORGANISATIONS DO BUSINESS

The internet has provided new ways for people to work online, such as working from home.

The way in which organisations do business has also changed. These changes include:
■Improved communication
■Access to global markets
■Access to a global workforce
■Use of big data to understand customer behaviour
■The way in which the organisation secures business information
■Increased competition.

TRANSACTIONAL DATA

An online transaction occurs whenever data is sent between devices on the internet. Some of this transactional data can be tracked online by network devices. This data is stored in cookies. It is possible to encrypt cookies when they are transferred between devices online.

SUBJECT VOCABULARY

transactional data data that is sent between digital devices
track collect and analyse data
cookies information that a website leaves on a user's computer so that the website will recognise that user when they use it again
encrypt protect information by putting it into a special code that only some people can read

SUBJECT VOCABULARY

referring website the website previously visited, which linked the user to the website that they are currently visiting
banner advertisement an image, animation or video that displays an advertisement for a product or service in a section of a web page
ad server a web server that stores, delivers and often tracks banner advertisements

There are different types of cookies.

■**Session cookies**: These are only stored until a web page is closed in the browser.

■ **Persistent cookies**: These are used to record information about the user's use of the internet over time. They can be used to keep a user logged into an online account so they do not have to log in every time they visit a website. These cookies also allow advertisers to track users' use of the internet.

■**Third-party cookies**: These can be used to personalise users' online experience or to send targeted adverts that are more relevant to an individual user. For example, they are used when web pages contain content such as **banner advertisements** for other websites,

Targeted marketing is advertising that is matched to people based on their attributes or their browsing history. Third-party cookies are used to do this. For example, if a user visits a web page that displays banner advertisements from an ad server, the ad server can store a cookie on that user's device. If the user then visits a different web page that uses the same **ad server**, another cookie will be stored on their device.

Why do I have to tell Santa what I want? Don't his elves track my online shopping preferences?

▲ Figure 11.6 Cookies can be used to track users' online behaviour

Revision questions

1. June/2022/Paper_4IT1_01/No.1(d)
(d) Letta shares holiday photographs with her friends.
(i) Explain one reason why Letta shares her photographs online using a social network rather than using email.
(ii) Give one reason why Letta does not have to get permission to share photographs she takes with her camera.

2. June/2022/Paper_4IT1_01/No.2(c)
(c) Letta watches a film online.
Describe one way to reduce the amount of time a film appears pixellated when it first loads from an online streaming service.

3. June/2022/Paper_4IT1_01/No.3(a, b, e)
Letta uses an online travel booking system.
(a) A travel booking system is one type of online service.
(i) Give two other types of online service.
(ii) List two features of a travel booking system.

(e) Letta checks some hotel reviews on an online community.
(i) Describe one key feature of a wiki that is different from the key features of a forum.
(ii) Describe one way an acceptable behaviour policy will benefit an online community.
(iii) Describe how one feature of an online community can be used to check that an acceptable behaviour policy is being followed.

4. June/2022/Paper_4IT1_01/No.4(a, b)
Letta uses the Internet for work.

(a) Letta can collaborate with others so expertise can be shared.
Explain one other way that the Internet could positively impact how Letta works.

(b) Letta's employer uses hosted applications and storage.

(i) Explain one benefit to Letta's employer of doing this.

(ii) State the type of computer used to store online software.

5. June/2022/Paper_4IT1_01/No.5(a)
Letta downloads software to her laptop.

(a) Explain two reasons why locally installed software is used for editing video.

6. June/2022/Paper_4IT1R_01/No.1(d)

(d) Nihal uses a social network to send photographs of his holiday to his friends.

(i) Explain one drawback to Nihal of sharing his photographs online using a social network rather than using email.

(ii) State who owns the copyright to Nihal's photographs.

7. June/2022/Paper_41T1R_01/No.3(a, b, c)
Nihal uses an online banking service.

(a) (i) List two features of an online banking service.

(ii) Describe one benefit to Nihal of online targeted marketing.

8. June/2022/Paper_41T1R_01/No.4(a, b, c)
Nihal uses the Internet for work.

(a) Nihal uses the Internet to update the skills he needs for his work.
Describe one other way using the Internet has had a positive impact on employment.

(b) Nihal's employer uses hosted storage.

(i) Explain one drawback to Nihal's employer of doing this.