# Foundations of Digital Marketing

# eCommerce

# SAMPLER





# Foundations of Digital Marketing



### Foundations of Digital Marketing eCommerce

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# **Key Features**

- > An innovative approach to building digital competencies, developed by expert educators.
- > Curriculum aligns with the latest industry standards, preparing students for certifications and future careers.
- > Well-defined learning goals and hands-on, applicable digital skills.



# **E-commerce** and cybersecurity

E-commerce is essential to daily life, and understanding its workings can assist individuals in safely navigating online transactions. In this unit, participants will explore different e-commerce models, learn about secure online payments, protect personal information from cyber threats, and evaluate their digital footprints while practicing safe browsing habits.

## **Learning Objectives**

#### In this unit, you will:

- > identify what e-commerce is, explore various e-commerce models, and understand how popular online platforms function.
- > explain the advantages and disadvantages of using e-commerce platforms and the ethical and legal considerations involved.
- > identify how technology supports e-commerce and how to safely make online transactions using credit cards, debit cards, and mobile payment systems.
- > recognize the importance of secure connections, identify trust signals in online transactions, and understand what information security entails.
- > identify how to protect your personal information online, including using strong passwords, multifactor verification, and safe sharing practices.
- > identify what the risks are when sharing information on social networks, and how to prevent identity theft and online fraud.
- > identify what a digital footprint is, how your online activities contribute to it, and the potential risks and benefits of having a digital footprint.
- > identify what real-world examples of major data breaches are, how they occurred, and how to protect against similar security threats.
- > enable and configure built-in security tools in your operating system to protect your device from online threats.

## Tools

- > Amazon
- > Microsoft Windows

# **E-commerce**

**E-commerce** is a term that refers to all forms of commercial transactions that take place over the Internet. Usually, e-commerce uses the World Wide Web in order to complete commercial transactions.

One of the most famous examples of e-commerce is **online shopping**, which includes the processes of buying and selling products as well as transferring money and data to carry out commercial transactions using various devices. E-commerce often includes procedures like the sale of physical products over the Internet, but it can also be used to describe any type of procedures and business transactions that are completed over the Internet.

## E-commerce depends on many technology systems and tools such as:

- Email
- Company content management systems
- Instant message exchange systems
- Newsgroups
- Online shopping systems
- Product delivery tracking services
- Online banking services
- Electronic payment gateways and online tickets



E-commerce advantages and disadvanta	ges
Advantages	Disadvantages
It offers detailed product descriptions and provides insight into customer reviews and opinions. This allows shoppers to make informed decisions and easily compare different products.	Although a detailed description of the product is provided, the customer cannot examine or try out the product before purchasing.
An unlimited number of purchases and payments can be done simultaneously in the online store.	Customers have to wait to receive the product while it is shipped.
The probability of errors is minimal due to the automation of store operations through the e-commerce platform.	Online shopping may involve additional costs such as taxes, shipping fees, etc.
The presence of an online store allows a company to greatly expand its markets and number of customers and not to depend on the local community of buyers, and the costs of maintaining the store are much lower than the maintenance of a physical store.	Some customers may hesitate to provide personal information during online registration due to concerns about potential hacker attacks and data breaches.

#### **Business to Business (B2B)**

This term refers to electronic exchanges of products, services, or information between companies.

These processes include:

- Exchange of product manuals between companies.
- Exchange of similar products between companies.
- Sharing of evidence and products between companies.

The exchange process between companies takes place through platforms that display products, services, and information related to inter-company transactions and provide interfaces for electronic purchase and transaction completion.

For example, Amazon offers its corporate and store customers — that sell their products through the popular website — the Fulfillment by Amazon (FBA) service, which is a paid service that enables those stores to store their most-requested products in Amazon stores. Amazon then packages and ships the store's merchandise to buyers from their stores and provides customer services to them as well.

#### **Business to Consumer (B2C)**

In the **B2C model**, companies sell products, services, or information directly to consumers.

One example of a B2C model is online retail sites where consumers buy products from:

- Direct manufacturers and companies.
- Electronic stores that sell products from a wide range of brands of producing companies.

#### **Consumer to Consumer (C2C)**

In the **C2C model**, consumers trade products, services, and information with each other over the Internet, and these transactions generally take place through a third party online platform on which the transactions are executed.

One of the most prominent examples of this model is the eBay store, which is an online auction site; another is Amazon.

## **Virtual goods**

A **virtual good** is a nonphysical object (such as electronic games, ebooks, and Internet software) that is traded in a virtual economy. Virtual goods are by definition immaterial and their value is determined exclusively by what users are willing to pay for them.

The virtual goods market has made impressive growth in recent years, driven by the growing popularity of social media platforms. One way to understand this is to consider those goods not as a product but as a service. As has become obvious recently in electronic games where the game itself is free, but the accessories that improve the user experience and the game environment are paid for, and these purchases of virtual goods are not essential to playing the game.



## **Online shopping**

**Online shopping** is a form of e-commerce that describes the activity or business where consumers purchase products or services directly from an online seller using a web browser.

The consumer connects to the Internet, browses the seller's website, then chooses an item and does what is needed to obtain that product, either paying when the product arrives or making an online payment using a credit or debit card.

Consumers can find the product that interests them by visiting the retailer's website directly or by searching among different sellers using a shopping search engine that displays the **availability** and prices of the same product in different online retailers. It has become possible for customers to do their shopping online using various devices, including desktops, laptops, tablets, smartphones, and smartwatches.

eBay was successfully launched in 1995 enabling anyone to subscribe and start selling or buying, allowing consumers to have a pioneering experience in the e-commerce revolution.

For Review Purposes (

## **Online shopping at Amazon**

Amazon.com is one of the largest online retailers in the world and the largest provider of cloud services.

**Amazon** is one of the most popular online stores used by individuals and companies, and it is available in many countries and in different languages.

Let's find out how we can purchase a product through this platform.





#### **Browse the Amazon website**

The Amazon platform offers a wide variety of products, allowing users to search, find desired items easily, and make online payments for home delivery. This section will explain how to search the website to purchase a printer.

#### To search for products:

- > Click on All icon to access the item list. 1
- > From the menu click Computers, 2 and then click Printers. 3
- In the search box type "laser" and press Enter -1. 4
- > The search results will be on the screen. 5









To purchase a product from Amazon, you must register on the website and create your own account.

#### To create an account:

- > From the Account & Lists menu, 1 click Start here. 2
- > Complete your registration by adding your personal information. 3
- > Click Continue. 4
- > Type in the verification code that was sent to your email. 5
- > Click Create your Amazon account. 6
- > Your name will be on the Account & Lists button. 🤈



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# Hands on!

Think of four technological systems and tools that e-commerce relies on. Share your thoughts with your colleagues. For Review Purposes Only

# Online transactions

When it comes to paying for a product or service, the payment options that exist in the market are cash, checks, debit cards, credit cards, mobile payments, and electronic bank transfers. An electronic payment is any form of payment that doesn't involve physical cash or a paper check. Methods of electronic payment include credit cards and debit cards.

An **electronic payment (e-payment)** can be simply defined as paying for goods or services on the Internet. It includes all financial operations using electronic devices, such as computers, smartphones, or tablets.

In general, e-payments are considered a fast and secure alternative to traditional payment methods. Accepting electronic payments comes with lots of benefits for both merchants (of any size) and consumers. Moreover, electronic payments are highly effective for international transactions. It is generally cheaper, easier, and faster than other payment methods. As a merchant, you don't have to worry about currency conversion or high commissions.

## Credit cards and debit cards

Giving customers the opportunity to pay online with their **debit** or **credit cards** is one of the most important payment methods. Being able to accept payments using Visa, MasterCard, and American Express means allowing a number of potential buyers to shop on a website and pay for their goods almost instantaneously. In some countries that use checks, electronic checks are considered one of the payment options where the electronic check allows the buyer to enter some information about the check (routing number, account number, names, authorization, and any other data) in an online form and then the payment process is automatically processed, without the need to go to the bank. Bank Name 1234 5678 9012 3456 1<sub>0000</sub>

## Mobile payment system

**Mobile payment** is defined as the process of paying a sum of money for a product or service through a portable electronic device such as a tablet or cell phone, and mobile payment technology can also be used to send money to friends or family members through applications such as PayPal.

Many banks have recently adopted technology in their banking applications that allow customers to send money, pay bills, and conduct various banking transactions directly from their bank accounts.

Payment can also be made from a mobile phone in stores by scanning a barcode on a mobile application, and this service has become available in many local and international stores and points of sale.

## Mobile devices are an alternative to credit cards

Mobile payments are now possible using Near Field Communication (NFC).

The idea of NFC is to just touch the smartphone to the NFC reader, which works just like a contactless payment credit card.

A smartphone that uses a **mobile payment system** is linked to a financial institution such as a bank or credit card company, just as it is linked to a phone service provider, and the payment process is done through the protocols of this financial institution.

## **E-wallet**

An **electronic wallet** is a type of electronic payment method used in transactions that take place over the Internet through a computer or smartphone. It is password protected and has the same functionality as a credit or debit card.

The electronic wallet is linked to a person's bank account to conduct financial transactions, and it can also be used as a prepaid account where users can load money for any future online transactions and specific online purchases such as purchasing airline tickets.

An electronic wallet contains two main components: software and information. The program stores personal information and provides digital security in addition to encrypting data. The information component is a database of details provided by the user (including name, shipping address, payment method, payment amount, credit card number, etc.).

Companies like Apple and Microsoft have their own digital wallets. For example, Apple owns Apple Pay, Microsoft owns Microsoft Wallet. There's also Samsung Pay and more.

Mobile Wallet

1234 5678 9012 3456

For Review Purposes Only

## **Online payment via the Web**

Many websites offer multiple direct payment methods which are completed through a special payment form. This method is suitable for customers who want to do their shopping periodically, as they have the option to create their own accounts and store their payment information for use in future transactions. Financial services companies offer websites online payment options by hosting a payment form, providing these websites with a secure payment process and a more secure way to preserve clients' financial data.

1234 5678 9012 3

E-payments are made using various means, like credit or debit card payments or bank transfers. Note that one of the most popular and common online payment methods nowadays is using a credit card.

## **E-commerce technologies**

Technological progress has greatly affected the world of e-commerce, changing the way consumers access different products, enabling them to shop effectively and at lower prices, making shopping comfortable and effortless as the products are delivered to the consumer's door. And so, e-commerce has now become an integral part of daily life.

Technology is the backbone of e-commerce, it not only helps connect vendors and customers through the mobile and web platforms, but it also enables the efficient management of customer orders, deliveries, returns, and payments for goods purchased. In fact, technology plays an important role across the entire e-commerce value chain.

As a result, e-commerce relies on technologies such as:

#### **Electronic Funds Transfer**

Electronic Funds Transfer (EFT) is a transaction that takes place over a computerized network, either between different accounts at the same bank or between accounts in separate financial institutions.

#### **E-marketing**

**Internet marketing**, also called digital marketing is the process of promoting a business or brand with its online products and activities using tools that help increase interest in the product, potential customers, and sales.

#### **Electronic Data Interchange**

Electronic Data Interchange (EDI) is the process of exchanging business information electronically and allowing one company to send information to another company electronically instead of the traditional paper exchange.

Some examples of EDI include purchase orders, invoices, transactions, shipping information, customs information, merchandise documents, and payment confirmations.

#### **Inventory management**

Inventory management is the process of overseeing the flow of goods and products from suppliers and manufacturers to warehouses and then to points of sale.

One of the primary functions of inventory management is to maintain a detailed record of every new or recalled product as it enters or exits a warehouse or point of sale.

#### **Digital distribution**

Digital distribution is the process of delivering digital media content such as audio, video, ebooks, video games, and other programs. This term is generally used to describe the process of distributing via the Internet instead of through physical distribution methods such as paper and optical discs.

#### **Online payment**

Electronic payment (e-payment) is defined as the process of payment for goods or services on the Internet to include all financial transactions that are made using electronic devices such as computers, smartphones, and tablets. The electronic payment process takes place in various ways, such as credit cards, debit cards, and bank transfers, and we will go into some of the details on the next page.

## **PayPal and Apple Pay**

**PayPal** operates a global online payment system and is an electronic alternative to traditional paper methods such as checks and money orders. The company acts as an online money payment processor for many commercial users who pay for additional benefits from the company such as one-click payment services and password reminders.

**Apple Pay** is Apple's mobile payment service and digital wallet that allows users to make payments in person, in iOS apps, and on the Web.

Apple Pay does not require the use of Apple Pay devices; rather, it works with many devices provided by other financial companies, provided that they have a contactless payment feature.

#### Secure online transactions

The ease of shopping and the ability to compare products and prices when shopping online has become attractive to more shoppers, but how can you ensure that your transactions are secure and that your credit card information goes only to the right place?

Some of the payment methods that we mentioned previously include the security of the transactions on the Internet, and there are other methods including:

- Smart cards (cards that can act as credit, debit, or prepaid cards)
- Prepaid cards (cards that you can buy and ship that contain specified amounts)
- Point of Sale (POS) devices (such as a personal digital assistant or a cell phone)
- Digital currencies
- Electronic wallets
- Online payment services such as PayPal

Bank cards are the most popular way to pay when you shop online. Although, this may entail some risk. The following list provides some advice on how to make sure your transaction is safe.

Essential online transaction security guidelines					
Guideline	Description				
Software updates in computers and smart devices.	It is recommended to install the latest updates for all your programs and applications in order to protect them from viruses and hackers. Make sure your antivirus software is installed and updated frequently.				
Be careful when shopping online.	Before entering any sensitive information, you must make sure that the store website or application you are using is safe. Search for a small padlock icon usually found in the website link at the top of the web page which indicates that all data entered to the site is protected by Transport Layer Security (TLS).				
Check for signals of trust and digital certificates.	Check the website you visit for logos that indicate digital certificates. By clicking on the logo, you can ensure that the site is real and not a fake copy of the original company's website.				

Read the privacy agreement.	The information entered on the website must be kept confidential. Be sure to read the company's privacy policy to ensure that your personal information is not sold to others.
Do not disclose or share your passwords or user ID information with others.	Use a strong password and enable double authentication (Two-Factor Authentication). Do not provide this data to anyone who requests it via email or any other means of communication, as this is most often an attempt to fraudulently access your financial and personal data. Remember to log out of your accounts when using public or shared computers.
Keep records of your transactions online.	Use secure payment methods such as PayPal as much as possible, and be sure to monitor your credit card statements regularly for accuracy.
After you have made purchases online, check your email.	Merchants often send emails or other messages to confirm your order.

## **Internet fraud**

The Internet continues to reshape the way consumers shop. The addition of retail apps and social media stores to online consumer options has prompted cybercriminals to develop for better flow and parallel structure. Scams often start with the creation of fake websites or fraudulent smartphone applications, tricking victims into using these deceptive platforms (a practice known as phishing). Fraudsters have built entire bogus online stores that are highly convincing. They often feature products that appear to come from trusted retailers, complete with familiar logos and URLs that closely resemble legitimate addresses. Also, popular products are offered at a low price compared to the usual cost, along with some advantages such as free shipping and fast delivery, which makes it easy to take advantage of online shoppers.

Some of these scammers deliver low-quality goods that are not worth the amount paid, yet most of the time, the goods never arrive. The losses may not stop there. Fraudsters may display false websites, applications, or links through pop-up ads, discount coupons, or emails containing malware designed to infiltrate devices and collect personal information for identity theft. Below, are some warning signs of online fraud.

Common warning signs	Common warning signs of online scams					
Warning sign	Explanation					
Big discounts	Some digital security firms advise people to beware of deals with discounts exceeding 55%.					
Poorly designed website or bad language	Real retailers are very keen to provide the best online experience by offering attractive websites and professional designs, thus substandard designs and improper website language and spelling are some of the signs of electronic fraud.					
Limited or suspicious communication options	For example, only a contact form is provided, or a customer service email is supplied with a Yahoo or Gmail domain, for example, not a company domain.					
URLs containing strange words or characters, or having unusual domains	Most stores use their brand name only in web addresses and well-known domains such as .com, while fraudulent websites use additional trademark words and strange domains such as .app or .bargain and others.					

## **Trust signals**

Trust signals are items often displayed on websites to help customers feel more secure in their decision to purchase a specific product or service.

Signals of trust are not just slogans. They include assurances that the retailer or website does indeed belong to a particular business. These signals also include evidence of the company's behavior, reputation, and trustworthiness.

Trust signals are varied, but they all perform the same function of making customers feel confident when dealing with the company and reassuring them that their money is safe, and that they will get the product or service that they paid for, and so trust signals are an important component in acquiring customers who buy from your website if you plan to do e-commerce.

When it comes to specific signals of confidence for use, this will vary greatly depending on the nature of the business that the company performs, in the case of an e-commerce website, for example, a store can join the Verified by Visa program to protect credit card transactions for its customer. If the company offers software or similar product downloads, they may need to implement some type of encryption protocol (such as https for secure web connections) or virus protection.

Security logos, transaction protection codes, and other similar trust signals should be placed on payment pages and web pages that request users to enter sensitive information such as credit card details. These flags of trust can also be placed strategically on product pages especially if the company offers software or online services that rely on user data integrity or privacy.

#### **Examples of trust signals:**

- Verified by Visa: Indicates that the transaction will be protected from fraud by one of the world's largest financial services providers. This sign of trust confirms the authenticity of the website and the security of the data exchanged during the buying process.
- Norton Seal: Is one of the most trusted brands which guarantees to Internet business owners as well as buyers that their operations will not be compromised during transmission. You can display it on your website after Digicert authenticates your business and the initial malware scan finds no malware.

The padlock icon next to "https://" in a browser indicates a secure, encrypted connection between the browser and web server, protecting data from being read or modified by unauthorized parties. Data encryption ensures that information is concealed from third parties, typically through programs that encrypt it on the sender's device and decrypt it on the receiver's.



#### **Secure connection**

A secure connection is a connection that is encrypted by one or more security protocols to ensure the security of data flow between two or more parties on a network. Communications that are not encrypted can be easily spied on by anyone with knowledge of how to do so, and the information becomes vulnerable to threats from malware and unexpected breaches. This information may include important data such as login data, passwords, financial data, etc.

Besides protecting data that is transferred from one computer to another, secure communications should be able to:

- Prevent any third parties from obtaining confidential data.
- Verify the identity of the person who wishes to access and exchange data.
- Prevent any unknown parties from viewing or changing information that they are not authorized to access.

### **Online shopping on Amazon**

In the previous lesson, you learned how to create an Amazon account and how to search for products. Now you will learn how you can add a product to your "Wish List."

The padlock icon is a trust signal that indicates that the communications between the browser and web server are encrypted and secure.

#### To create a wish list:

- > Click Add to List. 1
- > The item you selected will be in a pop-up window of the wish list. 2
- > Click View Your List. 3
- Your Wish List products will be on the screen. 4



Add to List

 1 item added to Wish List

 Brother MFC-L2820DW Wireless Compact Monochrome

 All-in-One Laser Printer with Copy, Scan and Fax, Duplex,

 Black & White | Includes Refresh Subscription Trial(1),

 Amazon Dash Replenishment Ready

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amazon <sub>© Deliver to Binary</sub>	- Search Amazon	Q =	Hello, Binary EN - Account & Lists	Returns	V. Cart	Î
🗮 All Today's Deals Registry Buy Again	Customer Service Gift Cards	Sell				
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If you want to purchase a product, the first thing you need to do is add it to the cart. Once you have added the product to the cart, you can complete the purchase procedure or continue shopping.

#### To add a product to the cart:

- > After selecting a product click Add to Cart. 1
- > Click Proceed to checkout (1 item). 2
- > Complete your address information, 3 and click Save changes. 4
- > Choose the appropriate payment method. 5
- > Choose the appropriate shipping options for you to complete your order. 6



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# Hands on!

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3 Offers

4 Items and shipping

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\*Why has sales tax been applied? See tax and seller information. Need help? Check our <u>Help pages</u> or <u>contact us</u>

What are the most important fraudulent website warning signs? Also, explain how trust signals help customers feel safer when shopping online. Why are these signals necessary? niy

# Information security

The concept of digital security relates to protecting computer hardware, networks, programs, and data from unauthorized access, which may aim to obtain or extort money from users, alter programs or destroy data, and sometimes even disrupt an organization's operations in general.

### **Information security**

The term **information security** expresses all practices that are carried out to protect information from risks and attacks that result from unauthorized access for the purpose of unlawful use, modification, destruction, copying or falsification of information. Digital security competencies can be summarized in the following points:

- Protect enterprise data and everything related to the preservation and use of that data.
- Protect the business continuity of the organization.
- Enabling the safe operation of applications built on the enterprise's IT systems.

## The importance of information security

The importance of information security has grown alongside the increasing value of data and information available on networks and the need for uninterrupted access by users. As the number of users accessing this data rises, so does the potential risk of exposure to cyberattacks. The more critical the information, the greater its vulnerability to computer piracy attacks aimed at theft, unauthorized access, or blocking user access.

The primary role of information security is to prevent, detect, and respond appropriately to internal and external threats as necessary.

The IT departments in the various institutions are concerned with developing the information security strategy for the enterprises through:

- Improving awareness of information security issues through training and various initiatives related to information security.
- Improving information security policies with continuous reviews to meet ever-changing security requirements.
- Regularly assessing and analyzing threats and vulnerabilities.
- Establishing and implementing necessary control measures and procedures to reduce risks.
- Monitoring to measure the performance of controls and control
   methods.
   For Review Purposes Only



## **Protection triangle**

The primary goal of information security is to focus on providing balanced data protection in terms of its confidentiality, integrity, and availability (this is known as the **CIA Triangle**), with a focus on effectively implementing information security policies, and we will now look into the details of each of these elements.

#### Confidentiality

**Confidentiality** is the provision of data and information only to persons concerned with it and who are allowed to have access to it, and to achieve this, various methods are used such as username and password, lists of persons with authority, and other methods of maintaining the confidentiality of data.

#### Integrity

The term **integrity** refers to preserving the accuracy and authenticity of information, ensuring that it can only be modified by persons authorized to do so, and methods of maintaining the integrity of data and information: specifying permissions, encryption, etc.

#### Availability

**Availability** means ensuring access to information in a timely and reliable manner for its use, as it is taken for granted that any information system has to provide information when needed in order to fulfill its primary purpose.

Examples of measures taken to ensure the availability of data and information include maintaining the integrity of the devices hosting the data, backups, system updates, and improving network efficiency to facilitate access for users whenever possible.







### Cybercrime

Review Purposes

**Cybercrime** is the use of a computer as a tool to achieve illegal ends, such as fraud, illegal distribution of copyrighted material, identity theft, or breach of privacy.

Computer crime and cybercrime have gained increased attention in recent years as computers have become a major tool for commerce and entertainment as well as for government business performance. Cybercrime differs from traditional criminal activity in its use of digital devices and computer networks to carry out these crimes. Although cybercrime is of a completely different nature from traditional crime, it is carried out by the same types of criminals for the same reasons. Network hackers and hackers are professional thieves who have the same motives as traditional criminals, and the methods they use to collect and steal data are similar to those that are followed during "traditional" crimes aimed at theft, where hackers break into a computer network to steal data in the same way that thieves break into a bank to steal money.

Only



Common types of	cybercrime
Cybercrime type	Description
Electronic fraud/ Phishing scams	This fraud occurs when the cybercriminal takes the role of a trusted party that the victim deals with, in order to obtain personal information about a specific user (such as bank passwords, home addresses, or identity numbers). This process is usually done by tricking the victim into visiting fake websites that imitate the official websites.
Identity theft	After the theft of personal data, fraudsters impersonate the victim and use his data to conduct financial transactions or illegal actions.
Online harassment	Online harassment includes threats via email, instant messages, or offensive posts on social media such as Facebook and X platform.
Infiltration/ Cyberstalking	Hackers often infect their victims' computers with malware that can record computer activity to monitor their online activities. For example, a keylogger tracks and secretly records information typed on the keyboard, making it difficult for a person to know that they are being monitored and their private data is being collected. Internet hackers have also been known to constantly harass their potential victims while trying to obtain their personal information.
Invasion of privacy	A privacy breach occurs when someone tries to intrude into another person's personal life, and this may include hacking into their personal computer, reading emails, or monitoring their personal activities over the Internet.

High-availability systems aim to maintain access to information at all times, and ensure that service is not interrupted due to power outages, hardware failures, or during system upgrades. They also include prevention of denial-of-service attacks such as those that rely on targeting the system with a multitude of messages, forcing it to shut down.

For Review Purposes (

1. E-commerce and cybersecurity 27

## **Security breach**

A **protection breach** occurs when an unauthorized party bypasses protection measures to access protected areas of the system, and the breach of protection can lead to hackers gaining control over valuable information such as corporate accounts, intellectual property, and customers' personal information that may include names, addresses, personal identity numbers, and credit card information.

Sometimes, the term data breach is used interchangeably with the term protection breach, although there is a fundamental difference between them, as a data breach occurs as a result of a protection breach, and data breaches may occur in different places and consecutively, where password theft may lead, for example, to hacking many other systems via the Internet.

It is common for users to use the same password on multiple online accounts, and although it is difficult to remember a set of different passwords, it is very important to use different passwords to protect data in the event of a breach of one of the systems that you use over the Internet.

#### Examples of protection breaches in the twenty-first century:

#### Facebook

In 2019, information security researchers revealed that millions of Facebook user records were scattered across the Internet due to some of the apps that Facebook allowed to access and store its users' data on their own servers, without applying the required security measures. Millions of records including Facebook user IDs, comments, likes, reactions, and account names were found in a database uploaded by Mexican digital publisher Cultura Colectiva discovered on Amazon Web Service (AWS).

#### X platform

In 2019, hundreds of X platform users inadvertently gave their personal data to third-party apps. The company admitted that it released a fix for a malicious code that may have been inserted into its application by hackers and that could have compromised the information of some users around the world. X platform was notified of the problem by third-party security researchers who discovered that the One Audience and Mobiburn software development groups had allowed access to sensitive user data. The exposed information included usernames, email addresses, and recent tweets.

#### Adobe

The company initially announced that the hackers had stolen nearly 3 million encrypted customer credit card records, in addition to login data for an unspecified number of user accounts, but after weeks of searching, it was discovered that this hack had revealed a lot of customer data, including their identifiers, passwords, and debit and credit card information.

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CIA

Triad

# Hands on!

Explain the elements that make up the triple CIA model, then explain how this model can be applied to ATM systems.





## Data protection day

28 January is Data protection day that is celebrated each year on the same date. Its objective is to inform and educate the public of their day-to-day rights and provides data protection professionals with the opportunity to meet and discuss data protection issues.



> Do some research online about Data Protection Day! Search the Web for more information and gather the information that will help you create a checklist.



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- > Open Microsoft Word and use it to create a checklist that helps people manage and maintain their personal online security.





#### Take a moment to reflect on your progress

How confident are you in your ability to apply the following skills?

- Defining and explaining the importance of e-commerce and identifying different e-commerce models.
- > Navigating e-commerce platforms, making safe online transactions, and identifying secure websites and trust signals.
- > Describing the advantages and disadvantages of e-commerce, including various online payment methods and their benefits.
- > Understanding online transactions' legal, ethical, and security aspects, including information security and the CIA Triad.
- > Knowing different types of cybercrimes, recognizing security breaches, and understanding strategies to protect your data.
- > Explaining personal and computer security, including the importance of strong passwords, multifactor verification, and safe management of personal information.
- > Defining a digital footprint, describing its creation, and managing Internet security settings to protect your data.
- > Enabling and configuring security settings on your device to prevent online threats.

# Key Terms

Apple Pay availability browser pop-up window browsing history Business to Business (B2B) Business to Consumer (B2C)

confidentiality

Consumer to Consumer (C2C) cookies credit card cybercrime debit card digital footprint digital trace double factor verification e-commerce e-marketing e-wallet harmful website information security integrity mobile payment system multiple factor verification online shopping PayPal personal security precaution protection triangle saved password security breach signal of confidence strong password virtual good



## Foundations of Digital Marketing

# eCommerce

#### Code the future, shape the world.

Have you ever wondered what powers the digital world behind the scenes? Imagine understanding how data flows, how systems connect, and how technology shapes our lives. What if you could explore the fundamentals of computer science and uncover the technologies we rely on every day?

Exploring the Digital World introduces you to computer science basics like data manipulation, network fundamentals, and the role of technology in society. Learn about monitoring systems, artificial intelligence, and emerging technologies through hands-on projects. You'll also explore networking concepts, from wired and wireless connections to cloud storage and data security.

By the end, you'll be ready to navigate the digital landscape and apply your skills in technology and project management with confidence.



