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Internet

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Introduction of internet

The internet is a global network of interconnected computers and devices that enable the exchange of information and communication across vast distances. It allows individuals, organizations, and governments to connect and access a wide variety of resources, such as websites, emails, social media platforms, online shopping platforms, and more.

The internet has revolutionized the way people live, work, and interact with one another. It has become an essential tool for research, education, entertainment, and business. With just a few clicks, users can access a wealth of information from anywhere in the world, making the internet a powerful source of knowledge and connectivity.

The internet is made possible through a system called the Internet Protocol Suite (TCP/IP), which allows for the transmission of data packets across networks. This technology ensures that information can be sent and received reliably and efficiently.

In addition to its information-sharing capabilities, the internet has also transformed various industries and sectors. It has opened up new avenues for e-commerce, allowing businesses to reach a global customer base and enabling consumers to shop conveniently from their homes. It has also facilitated the growth of online education, remote work, and telecommunication, making it possible for individuals to connect and collaborate from different parts of the world.

However, with the proliferation of the internet, concerns about privacy, cybercrime, and online security have also emerged. As a result, there is an ongoing need for individuals and organizations to be vigilant and take appropriate measures to protect their data and personal information while using the internet.

Overall, the internet has fundamentally transformed the way we live, communicate, and access information. It has connected people across the globe, opened up new opportunities, and revolutionized various aspects of society.

Intranet

An intranet is a private network that is used within an organization to facilitate communication, collaboration, and the sharing of resources. It functions similarly to the internet but is limited to internal use within the organization.

Unlike the internet, which is accessible to the public, an intranet is only accessible to authorized users within the organization. It is typically created using internal servers and software systems and can be accessed through a web browser or dedicated software.

The primary purpose of an intranet is to improve internal communication and streamline information sharing within the organization. It provides employees with a centralized platform to access important documents, company news,

announcements, policies, and procedures. It can also include tools for team collaboration, such as shared calendars, project management software, and discussion forums.

An intranet helps to enhance productivity by providing a single point of access to various resources and tools that employees need to perform their tasks. It reduces the reliance on traditional forms of communication, such as paper-based memos or physical meetings, by enabling efficient electronic communication.

Additionally, an intranet can be customized to meet the specific needs of the organization. It can include features like employee directories, training materials, HR resources, and even social networking capabilities to foster a sense of community and engagement among employees.

Overall, an intranet serves as a secure and efficient platform for internal communication and collaboration within an organization. It promotes information sharing, streamlines processes, and can contribute to increased productivity and employee satisfaction.

Service of internet

The term "internet" is not a standard term used in the field of internet services. However, if you are referring to advanced or specialized internet services, there are several options available:

1. **Hosting Services:** These services provide full management and support for hosting websites and applications on servers maintained by the service provider.
2. **Content Delivery Networks (CDNs):** CDNs optimize web performance by caching website content in multiple server locations around the world, reducing latency and improving availability.
3. **Virtual Private Networks (VPNs):** VPNs create a secure connection between a user's device and the internet, encrypting data to protect privacy and security.
4. **Domain Name System (DNS) Services:** DNS services improve website performance by efficiently routing users to the closest server based on their geographic location.
5. **Cloud Computing Services:** Cloud platforms provide scalable computing resources on-demand, enabling businesses to easily host websites, run applications, store data, and more without investing in physical infrastructure.

These are just a few examples of specialized internet services that offer enhanced functionality or security beyond basic internet connectivity.

Domain name

A domain name is a unique web address that identifies a specific website. It is what users type into their web browser to access a website, such as "www.example.com". Domain names are registered with domain registrars and typically consist of two main parts: the top-level domain (TLD) and the second-level domain (SLD). The TLD represents the type or category of the website (.com, .org, .net, etc.), while the SLD is the actual name chosen by the owner of the website.

URL

A URL (Uniform Resource Locator) is the address used to access a web page or a resource on the internet. It typically consists of several parts, including the protocol (such as HTTP or HTTPS), domain name, and path to the specific resource.

For example, here is a URL for Google's homepage:

<https://www.google.com/>

Here, "https://" is the protocol, "www.google.com" is the domain name, and "/" represents the root directory or path to access Google's homepage.

URLs can also include additional parameters or query strings that provide more information about how to retrieve or display a specific resource. For example:

<https://example.com/search?q=URL>

In this case, "?q=URL" indicates that we are performing a search and passing "URL" as the query parameter.

Browser

A web browser is a software application that allows users to access and view websites on the internet. Some popular web browsers include Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari. You can use a web browser to search for information, watch videos, check email, and perform various online tasks. If you have any specific questions or need information about web browsers, feel free to ask!

Types of browsers

There are several web browsers available for accessing the internet, each with its own features and capabilities. Here are some of the most popular web browsers as of my last knowledge update in September 2021:

1. **Google Chrome:** Developed by Google, Chrome is one of the most widely used web browsers known for its speed, simplicity, and extensive library of extensions and add-ons.

2. Mozilla Firefox: Firefox is an open-source browser known for its privacy features, customization options, and a strong focus on user security.

3. Microsoft Edge: This is Microsoft's browser, and it's the default browser on Windows 10 and later. It offers integration with Microsoft services and has been praised for its performance.

4. Apple Safari: Safari is Apple's browser and is the default on macOS and iOS devices. It's known for its speed, energy efficiency, and seamless integration with Apple products.

5. Opera: Opera is a feature-rich browser with a built-in ad blocker, free VPN, and various other tools to enhance browsing.

6. Brave: Brave is a privacy-focused browser that blocks ads and trackers by default, aiming to give users a faster and more private browsing experience.

7. Vivaldi: Vivaldi is known for its high degree of customization, allowing users to tailor the browser's appearance and functionality to their liking.

8. Tor Browser: The Tor Browser is designed for anonymity and privacy, using the Tor network to anonymize your online activity.

9. UC Browser: Popular in some regions, UC Browser is known for its speed and data compression features, making it suitable for slower connections.

10. Epic Privacy Browser: As the name suggests, Epic Privacy Browser is designed with a strong emphasis on privacy and security, blocking various tracking mechanisms.

These are some of the most well-known web browsers, but there are many others available, each with its own strengths and weaknesses. Users often choose a browser based on factors like speed, privacy features, customization options, and compatibility with their devices and operating systems. It's important to keep in mind that the browser landscape can change over time, so there may be new browsers or updates to existing ones since my last knowledge update in September 2021..

Search engines

Search engines are web-based tools or platforms that allow users to search for information, websites, images, videos, and other online content. They work by crawling and indexing the vast amount of information available on the internet and then providing users with relevant search results based on their queries. Some of the most popular search engines as of my last knowledge update in September 2021 include:

1. **Google:** Google is the most widely used search engine globally, known for its speed, accuracy, and extensive search capabilities.
2. **Bing:** Developed by Microsoft, Bing is known for its visually appealing homepage and provides a broad range of search results, including web, images, videos, and news.
3. **Yahoo:** Yahoo Search offers search results and is known for its integrated Yahoo Mail and Yahoo News features.
4. **DuckDuckGo:** DuckDuckGo is a privacy-focused search engine that emphasizes user privacy by not tracking user searches or displaying personalized results.
5. **Baidu:** Baidu is the leading search engine in China, providing search results, maps, and other online services.

6. Yandex: Yandex is a Russian search engine that offers search services and various online tools, including email and maps.

7. Ecosia: Ecosia is an eco-friendly search engine that uses its ad revenue to plant trees. It's known for its environmental focus.

8. Startpage: Startpage is a privacy-oriented search engine that uses Google search results but doesn't track user data.

9. Qwant: Qwant is a European search engine that focuses on user privacy and the protection of personal data.

10. Swisscows: Swisscows is a family-friendly search engine that uses semantic technology to provide more contextually relevant search results.

Remember that the effectiveness of a search engine can vary based on factors like the user's location, the type of information being searched for, and individual preferences for privacy and features. Additionally, the search engine landscape may have evolved in my last update in September 2021, with new players entering the market or changing existing search engines' features and policies.

Email

Email, short for electronic mail, is a widely used method of exchanging digital messages over the internet. It allows individuals and organizations to send and receive messages, documents, files, and other types of electronic communication. Here are some key points about email:

1. **Email Address:** To send or receive emails, you need an email address. It typically consists of a username, the "@" symbol, and a domain name (e.g., username@example.com).
2. **Email Clients:** Email can be accessed through email clients or apps such as Microsoft Outlook, Apple Mail, Mozilla Thunderbird, or web-based platforms like Gmail, Yahoo Mail, and Outlook.com.
3. **Sending Emails:** To send an email, you compose a message, add recipients' email addresses, a subject line, and the message content. You can also attach files if needed.
4. **Receiving Emails:** When someone sends you an email, it is delivered to your inbox. You can read, reply to, forward, or archive messages.
5. **Attachments:** Emails often allow you to attach files (documents, images, etc.) for sharing with the recipient.
6. ****Folders and Labels**:** Most email services provide folders or labels to help you organize your emails. Common folders include Inbox, Sent, Spam, and Trash.
7. **Spam and Filters:** Spam emails (unsolicited or unwanted messages) are filtered by email services to keep your inbox clean.
8. **Encryption:** Some email services offer end-to-end encryption to ensure the security and privacy of your messages.
9. **Email Signatures:** You can create email signatures that appear at the end of your messages, typically containing your contact information.
10. **CC and BCC:** You can send copies of an email to multiple recipients using "CC" (carbon copy) or hide recipients' email addresses using "BCC" (blind carbon copy).
11. **Email Protocols:** Email communication relies on protocols like SMTP (Simple Mail Transfer Protocol) for sending and POP3 or IMAP for receiving.

12. Email Providers: There are numerous email service providers, including Gmail (by Google), Outlook.com (by Microsoft), Yahoo Mail, and more. These services offer free and paid email accounts with various features.

Email is a fundamental tool for personal and professional communication. Its convenience, speed, and widespread adoption make it an essential part of modern communication.

Basic components of Email

Emails consist of several basic components that come together to form a complete message. Here are the essential components of an email:

1. Recipient(s): The recipient's email address specifies who will receive the email. You can send an email to one or multiple recipients by adding their email addresses in the "To" field.

2. **Subject Line:** The subject line briefly describes the content or purpose of the email. It helps recipients understand what the email is about before opening it.

3. **Salutation (Optional):** The salutation is a greeting at the beginning of the email. Common salutations include "Dear [Recipient's Name]," "Hello," or "Hi."

4. **Email Body:** The email body contains the main message you want to convey. It can include text, images, links, and formatting. This is where you provide the content of your message.

5. **Attachments (Optional):** You can attach files to your email, such as documents, images, or videos. Attachments allow you to share additional information with the recipient.

6. **Signature (Optional):** An email signature is typically placed at the end of the email and includes your name, contact information, and any other relevant details. It's a way to sign off your message.

7. **Closing:** The closing is a polite way to end your email. Common closings include "Sincerely," "Best regards," or "Thank you." It is followed by your name.

8. **Sender's Email Address:** Your email address is included in the "From" field, indicating who the email is coming from. Recipients can reply to this address to send you a response.

9. **Date and Time:** The date and time when the email was sent are displayed in the email header. This information helps recipients understand when the message was written.

10. **CC (Carbon Copy) and BCC (Blind Carbon Copy):** These fields allow you to send copies of the email to additional recipients. CC recipients are visible to all other recipients, while BCC recipients are hidden from others.

11. **Inbox Folders:** After sending, emails are typically stored in folders such as "Sent," "Inbox," "Drafts," and "Trash" to help you organize and manage your email.

12. **Reply and Forward Options:** Email clients provide buttons to reply to or forward the email to other recipients. This makes it easy to continue the conversation or share the message.

These basic components work together to create effective email communication. Depending on your email client or service, there may be

additional features or options available, but these elements form the core structure of an email message.

How to send email

Sending an email typically involves using an email client or a web-based email service. Here are the general steps to send an email:

1. **Open Your Email Client or Service:** Start by opening your preferred email client or web-based email service. Common email clients include Microsoft Outlook, Apple Mail, Mozilla Thunderbird, while web-based services include Gmail, Yahoo Mail, and Outlook.com.
2. **Log In:** If you're not already logged in, you'll need to enter your email address and password to access your email account.
3. **Compose a New Email:** Look for a button or option that allows you to compose a new email. This is usually labeled "Compose," "New," or represented by a pen icon.
4. **Enter Recipient's Email Address:** In the "To" field, enter the recipient's email address. If you're sending the email to multiple recipients, you can separate their addresses with commas.
5. **Add a Subject:** Enter a brief, descriptive subject in the subject line. This summarizes the content of your email.
6. **Write Your Email:** In the main body of the email, type your message. You can format text, add links, insert images, and more, depending on the capabilities of your email client or service.
7. **Attach Files (Optional):** If you want to send files or documents with your email, look for an attachment icon (usually represented as a paperclip) and follow the prompts to select and attach the files.
8. **CC and BCC (Optional):** If necessary, you can use the CC (Carbon Copy) and BCC (Blind Carbon Copy) fields to send copies of the email to additional recipients. CC recipients are visible to others, while BCC recipients are not.
9. **Check Your Message:** Before sending, review your email to ensure it's complete and error-free, including recipient addresses, subject, and content.

10. Send Your Email: Once you're satisfied with your email, click the "Send" button. Your email client or service will then send the message to the recipient(s).

11. Confirmation: After sending, you may receive a confirmation message or notification, depending on your email client or service settings.

12. Sent Folder: A copy of the email is usually saved in your "Sent" folder for reference. You can access this folder to view the emails you've sent.

That's the basic process for sending an email. These specific steps and options may vary slightly depending.

How to send group Emails

Sending a group email, often referred to as sending an email to a mailing list or a group of contacts, can be done through most email clients and services. Here are the steps to send a group email:

1. **Open Your Email Client or Service**: Start by opening your email client or web-based email service, such as Gmail, Outlook, or Yahoo Mail.

2. **Login**: If you're not already logged in, enter your email address and password to access your email account.

3. **Access Contacts or Address Book**: Locate and access your contacts or address book within your email client or service. This is where you'll find the list of recipients you want to send the group email to.

4. **Create a Group or Mailing List**: Most email services allow you to create groups or mailing lists to easily send email to multiple recipients at once. Look for an option to create a new group or list, and give it a name.

5. **Add Contacts to the Group**: In the group or mailing list you've created, add the email addresses of the contacts you want to include in the group email. You can typically do this by searching for and selecting contacts from your address book.

6. **Compose a New Email**: Click on the "Compose" or "New" button to start composing a new email.

7. **Enter the Group Name**: Instead of typing individual email addresses in the "To" field, enter the name of the group or mailing list you created. Your email client or service should recognize it.

8. **Add a Subject and Write Your Email**: Enter a subject for your group email and compose the message in the email body, just as you would for a regular email.

9. **Review and Attachments (Optional)**: Review your group email to ensure everything is correct. If you need to attach files, use the attachment feature, typically represented by a paperclip icon.

10. **Send Your Group Email**: When you're ready to send, click the "Send" button. Your email client or service will send the email to all the contacts in the group.

11. **Confirmation**: After sending, you may receive a confirmation message or notification, depending on your email client or service settings.

12. **Check Sent Folder**: A copy of the group email is usually saved in your "Sent" folder for reference.

By creating a group or mailing list, you can easily send email to multiple recipients without having to manually enter each email address every time. This is particularly useful for sending newsletters, announcements, or updates to a group of people. Be sure to maintain your contact list and update your groups as needed to keep your email communications organized.

E-commerce

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commerce, short for electronic commerce, refers to the buying and selling of goods and services over the internet. It has become a significant part of the global economy and has transformed the way businesses and consumers engage in trade. Here are some key aspects of e-commerce:

1. **Online Stores**: E-

commerce includes online stores or websites where businesses display their products or services for sale. Customers can browse, select items, and make purchases online.

2. **Types of E-commerce**

- **Business-to-Consumer (B2C)**: Retailers sell products or services directly to individual consumers.

- **Business-to-Business (B2B)**: Companies sell products or services to other businesses.

- **Consumer-to-Consumer (C2C)**: Individuals sell products or services to other individuals through online platforms (e.g., eBay, Craigslist).

- **Consumer-to-Business (C2B)**: Individuals offer their products or services to businesses (e.g., freelance work, influencer marketing).

3. **Payment Processing**: E-commerce websites use secure payment gateways to process online transactions. Common payment methods include credit cards, digital wallets (e.g., PayPal), and bank transfers.
4. **Shopping Cart**: An online shopping cart allows customers to add products they want to buy and review their selections before making a purchase.
5. **Product Listings**: E-commerce websites provide detailed product listings with descriptions, prices, images, and customer reviews to help shoppers make informed decisions.
6. **Shipping and Delivery**: E-commerce businesses manage the shipping and delivery of products to customers' addresses. Options may include standard, express, or international shipping.
7. **Security**: Security measures, such as SSL encryption, protect sensitive customer information, including payment details, to ensure safe online shopping.
8. **E-commerce Platforms**: Many businesses use e-commerce platforms like Shopify, WooCommerce (WordPress plugin), Magento, and others to set up and manage their online stores.
9. **Mobile Commerce (M-commerce)**: With the increasing use of smartphones and tablets, M-commerce allows customers to shop using mobile apps or mobile-optimized websites.
10. **Marketing and Advertising**: E-commerce companies use various digital marketing strategies, including social media marketing, search engine optimization (SEO), and email marketing, to attract and retain customers.
11. **Customer Support**: E-commerce businesses provide customer support through chat, email, or phone to assist with inquiries, issues, and returns.
12. **Data Analytics**: Data collected from e-commerce transactions and customer interactions help businesses make informed decisions.

Digital signature

A digital signature is a cryptographic technique used to verify the authenticity and integrity of a digital document, message, or electronic transaction. It provides a way to ensure that the sender of the document is who they claim to be and that the document has not been altered in transit.

Here's how digital signatures work:

1. **Generating a Digital Signature**:

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A digital signature is typically created using a mathematical algorithm and a private key known only to the sender.

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The sender's private key is used to generate a unique digital signature for the document.

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2. **Attaching the Digital Signature**:

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The digital signature is attached to the document, often in the form of a cryptographic hash or a unique code.

3. **Sending the Document**:

- The sender sends both the document and the digital signature to the recipient.

4. **Recipient's Verification**:

- The recipient receives the document and the digital signature.

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The recipient uses the sender's public key (which is openly available) to decrypt and verify the digital signature.

5. **Verification Process**:

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If the document has not been altered in transit, and the digital signature matches the document's content, the recipient can trust that the document is authentic and hasn't been tampered with.

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If the digital signature doesn't match the document's content or if the document has been altered, the verification will fail, indicating potential tampering or forgery.

Digital signatures are commonly used in various contexts, including:

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Emails: To verify the sender's identity and ensure the integrity of email communications.

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Document Signing: For signing contracts, legal documents, and other digital paperwork electronically.

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Software Distribution: To ensure that software downloads haven't been altered or infected with malware during distribution.

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Financial Transactions: In online banking and electronic fund transfers to authenticate transactions.

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Government and Legal Documents: For secure electronic filing and authentication of legal and government documents. A digital signature is a cryptographic technique used to verify the authenticity and integrity of a digital document, message, or electronic transaction. It provides a way to ensure that the sender of the document is who they claim to be and that the document has not been altered.

Digital currency

Digital currency refers to a type of currency that exists only in electronic form, with no physical representation like coins or banknotes. These digital currencies are used for online transactions and are typically based on cryptographic techniques for security and verification. Here are some key points about digital currency:

1. **Cryptocurrencies**: The most well-known form of digital currency is cryptocurrencies like Bitcoin, Ethereum, and Litecoin. These cryptocurrencies operate on decentralized blockchain technology, which ensures security and transparency in transactions.
2. **Central Bank Digital Currencies (CBDCs)**: Some central banks are exploring the development of their own digital currencies. These are digital versions of the traditional currency issued and regulated by a country's central bank. CBDCs aim to combine the benefits of digital transactions with the stability and government backing of fiat currencies.
3. **Tokens and Digital Assets**: Beyond cryptocurrencies, digital currencies can also represent various assets or tokens within a blockchain ecosystem. These tokens can represent ownership in digital assets, access to specific services, or even voting rights in decentralized organizations.

4. **Wallets**: Users of digital currencies typically use digital wallets to store, send, and receive their funds. These wallets can be software-based (online or mobile apps) or hardware-based (physical devices).

5. **Decentralization**: Many digital currencies, especially cryptocurrencies, are designed to operate on decentralized networks. This means there is no central authority controlling the currency, and transactions are verified by a distributed network of computers (nodes).

6. **Security**: Digital currencies often rely on advanced cryptographic techniques to secure transactions and control the creation of new units. This makes them resistant to counterfeiting and fraud.

7. **Transparency**: Transactions made with digital currencies are recorded on a public ledger (blockchain), which allows anyone to view transaction history. This transparency can enhance trust in the currency.

8. **Volatility**: Many digital currencies, particularly cryptocurrencies, are known for their price volatility. Their values can fluctuate significantly over short periods.

9. **Use Cases**: Digital currencies are used for a variety of purposes, including online purchases, investment, remittances, and as a means of transferring value across borders with lower fees compared to traditional financial systems.

10. **Regulation**: The regulatory environment for digital currencies varies by country and is still evolving. Some countries have embraced cryptocurrencies, while others have imposed restrictions or outright bans.

Digital currencies have gained significant attention and adoption in recent years, with cryptocurrencies becoming mainstream investments and CBDCs under development by central banks worldwide. Their impact on the future of finance and commerce continues to be a topic of interest and debate.

Online shopping and transactions

Online shopping and transactions refer to the process of purchasing goods and services over the internet. It has become increasingly popular due to its convenience, wide selection of products, and the ability to shop from the comfort of your home. Here's how online shopping and transactions work:

1. **Browsing and Selection**:

- Shoppers visit e-commerce websites or mobile apps to browse through products and services. These platforms often provide categories, search bars, and filters to help users find what they're looking for.

2. **Product Details**:

- Product listings include detailed information about items, including descriptions, prices, images, and customer reviews. This information helps shoppers make informed decisions.

3. **Adding to Cart**:

- When a shopper finds a product they want to purchase, they can add it to their online shopping cart. The cart accumulates selected items.

4. **Checkout**:

- Once a shopper is ready to complete their purchase, they proceed to the checkout page. Here, they review their cart, enter shipping information, and choose a payment method.

5. **Payment Processing**:

- Shoppers provide payment information, which may include credit or debit card details

s,digitalwalletinformation,orotherpaymentoptions.

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Secure payment gateways process the transaction, encrypting sensitive data to protect it from unauthorized access.

6. **Order Confirmation**:

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After successfully completing the payment process, shoppers receive an order confirmation that includes details of their purchase, estimated delivery date, and an order number.

7. **Shipping and Delivery**:

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The online retailer processes the order, packages the products, and arranges for delivery or shipping. Tracking information is often provided to monitor the shipment's progress.

8. **Receipt and Invoicing**:

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Upon delivery, shoppers receive an invoice or receipt, either digitally or with the physical package, confirming the purchase and payment.

9. **Returns and Customer Support**:

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If there are issues with the received items, shoppers can contact customer support for returns, exchanges, or refunds, depending on the retailer's policies.

10. **Security**:

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Online shopping platforms employ various security measures, including encryption, to protect sensitive customer data and financial information.

11. **Reviews and Feedback**:

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Shoppers may leave reviews and feedback on products and services, helping other potential buyers make decisions and providing valuable input to the retailer.

Online shopping and transactions offer many advantages, such as convenience, access to a wide variety of products, and the ability to compare prices easily. However, it's important for shoppers to exercise caution, ensure the security of their personal information, and only purchase from reputable and secure online retailers.

