

## From Files to Networks

---

### Textbook

---

## From Files to Networks



### Why So Many File Types?

Have you ever noticed that music files, images, and school documents all end in different letters—like `.mp3`, `.jpg`, or `.docx`? These are called *file formats*. Each type tells your device what kind of data is inside and which program can open it. For example, a `.jpg` file is usually a photo, and a `.mp3` file is a sound recording., then you also have `.mp4` which handles videos. There are even special formats for 3D designs like `.stl` or `.obj`. Different formats exist so computers can store, read, and share data in the most useful and efficient way.

### Online vs. Desktop: Same Tool, Different Homes

Some apps can live on your computer (desktop versions), and others work through the internet (online versions). For example, Microsoft Word has a program you can download, but it also has an online version you can access from anywhere. Online apps are great for teamwork and access on the go, while desktop versions might offer more advanced features or work even when you don't have Wi-Fi.

### Wired or Wireless—How Do You Connect?

Computer networks help devices "talk" to each other—but how they connect can differ. A *wired* network uses cables to connect to the internet or other computers. This usually means faster speeds and better security. A *wireless* network (like Wi-Fi) uses radio waves to connect, which lets you move around freely. Both types have their strengths, and many homes and schools use a mix of both.

### Sending Messages Through the Web

Whenever you send a photo, message, or video online, your device breaks the information into smaller parts called *data packets*. These packets travel through cables or Wi-Fi to reach another device, where they're reassembled. It doesn't matter if it's text, music, or video—everything travels in the form of digital data using special rules called *protocols*. That's how a message you send in seconds can arrive on the other side of the world!

## Critical Thinking Questions

1. Why might it be helpful to have both an online and desktop version of the same application?
2. Imagine you need to send a large video file to a friend. Would a wired or wireless connection work better—and why?

## Questions (5)

### 1. Which file format is most likely used for a music file?

MULTIPLE CHOICE

Choose the correct answer:

- A. .docx
- B. .jpg
- C. .mp3
- D. .png

### 2. What is one advantage of using a desktop application instead of an online one?

MULTIPLE CHOICE

Choose the correct answer:

- A. It always has fewer features
- B. It can't work without Wi-Fi
- C. It lets you collaborate live
- D. It may work without the internet

### 3. What does a wireless network use to connect devices?

MULTIPLE CHOICE

Choose the correct answer:

- A. Fiber optic cables
- B. Ethernet
- C. Radio waves
- D. Phone lines

**4. What do computers use to send information across networks?**

**Choose the correct answer:**

- A. Texts
- B. CD's
- C. Data packets
- D. Passwords

**5. Why do different file formats exist?**

**Choose the correct answer:**

- A. To make computers more confusing
- B. To limit who can open your file
- C. To save space on the internet
- D. To allow specific types of data to be used in the best way

---

## Answer Keys & Solutions

---

### Questions

---

1. Which file format is most likely used for a music file?

MULTIPLE CHOICE

Correct Answer:

- |          |             |
|----------|-------------|
| A. .docx | ✗ Incorrect |
| B. .jpg  | ✗ Incorrect |
| C. .mp3  | ✓ Correct   |
| D. .png  | ✗ Incorrect |

2. What is one advantage of using a desktop application instead of an online one?

MULTIPLE CHOICE

Correct Answer:

- |                                     |             |
|-------------------------------------|-------------|
| A. It always has fewer features     | ✗ Incorrect |
| B. It can't work without Wi-Fi      | ✗ Incorrect |
| C. It lets you collaborate live     | ✗ Incorrect |
| D. It may work without the internet | ✓ Correct   |

3. What does a wireless network use to connect devices?

MULTIPLE CHOICE

Correct Answer:

- |                       |             |
|-----------------------|-------------|
| A. Fiber optic cables | ✗ Incorrect |
| B. Ethernet           | ✗ Incorrect |
| C. Radio waves        | ✓ Correct   |
| D. Phone lines        | ✗ Incorrect |

#### 4. What do computers use to send information across networks?

Correct Answer:

- A. Texts ✗ Incorrect
- B. CD's ✗ Incorrect
- C. Data packets ✓ Correct
- D. Passwords ✗ Incorrect

#### 5. Why do different file formats exist?

Correct Answer:

- A. To make computers more confusing ✗ Incorrect
- B. To limit who can open your file ✗ Incorrect
- C. To save space on the internet ✗ Incorrect
- D. To allow specific types of data to be used in the best way ✓ Correct