

Chương 3

THIẾT BỊ NHẬP

CT200
Nền tảng CNTT



Các thiết bị nhập?

- An **input device** is any *hardware* component that allows users to *enter data and instructions* into a computer

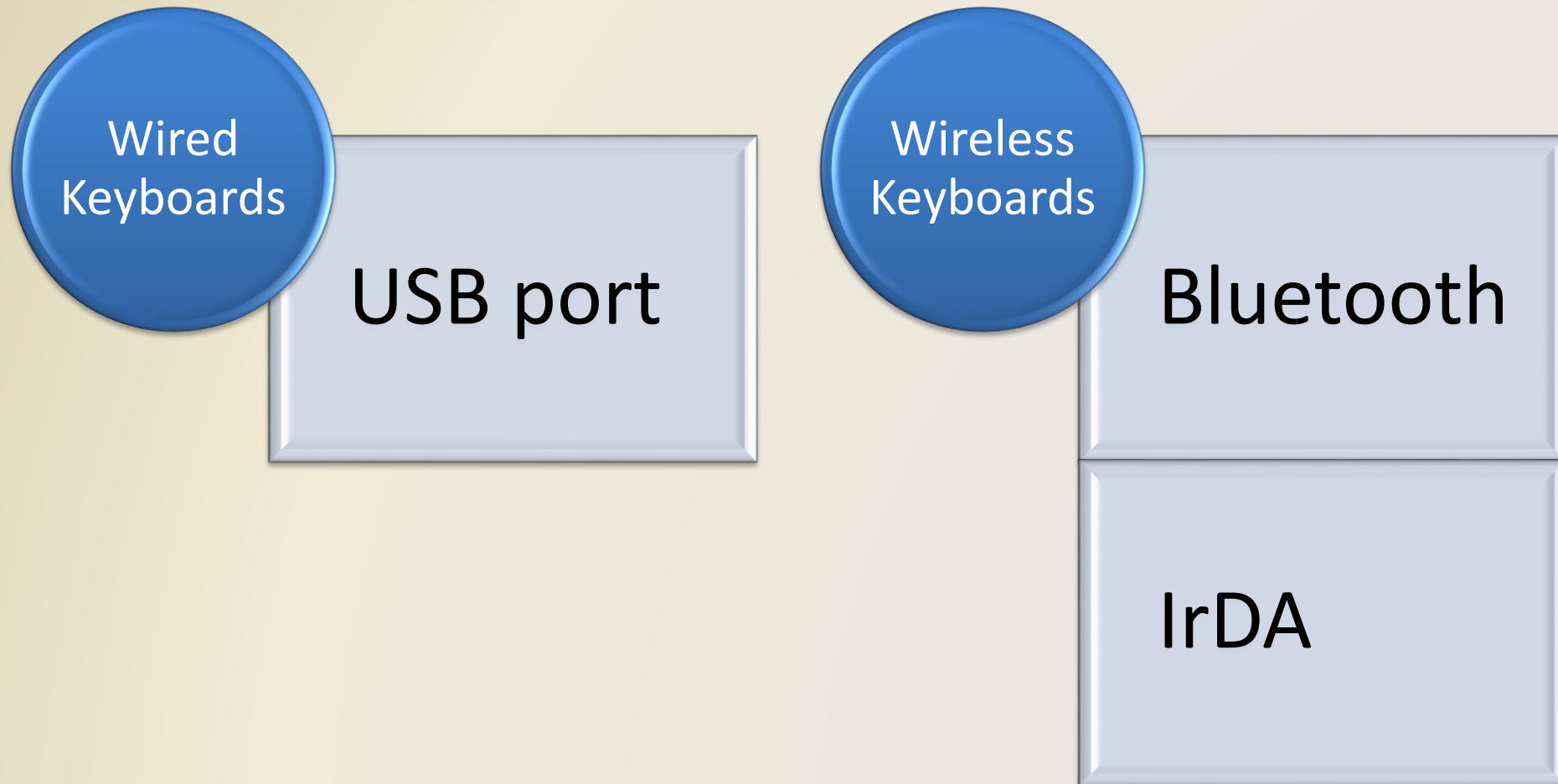


Bàn phím

- A **keyboard** is an *input device* that contains keys users press to *enter data and instructions* into a computer



Bàn phím (3)



Bàn phím (4)

- Wireless keyboards:



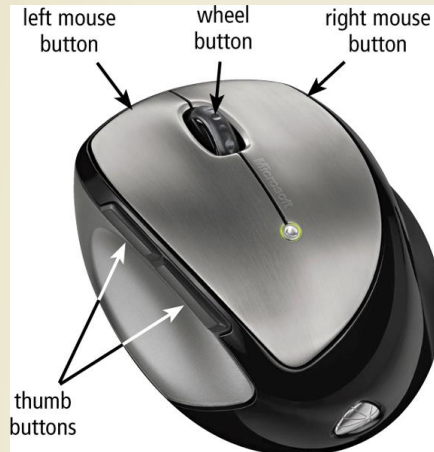
Thiết bị trỏ

A **pointing device** is an *input device* that allows a user to *control a pointer* on the screen

A **pointer** is a small symbol on the screen whose location and shape change as a user moves a pointing device

Chuột

- A **mouse** is a *pointing device* that detects *two-dimensional motion* on a surface
 - allows a smooth control of the graphical user interface
- A mouse can be wired or wireless



Thiết bị trỏ khác



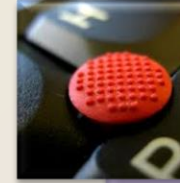
Trackball

- A **trackball** is a stationary pointing device with a ball on its top or side



Touchpad

- A **touchpad** is a small, flat, rectangular pointing device that is sensitive to pressure and motion

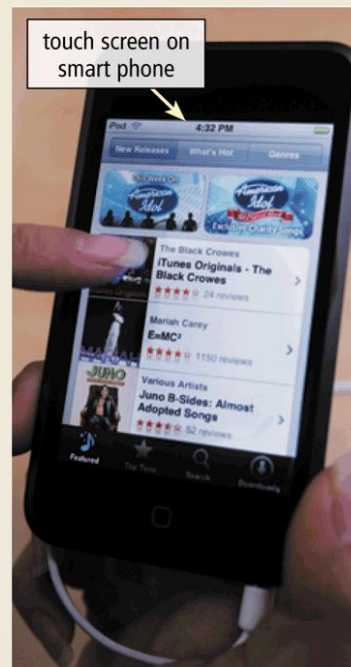


Pointing Stick

- A **pointing stick** is a pressure-sensitive pointing device shaped like a pencil eraser that is positioned between keys on a keyboard

Touch Screens and Touch-Sensitive Pads

- A **touch screen** is a touch-sensitive display device



Pen Input

- With **pen input**, you touch a **stylus** or **digital pen** on a flat surface to write, draw, or make selections



Other Input for Smart Phones



Digital Cameras

- A **digital camera** is a mobile device that allows users to take pictures and store them digitally

Studio cameras

Field cameras

Point-and-shoot camera

Digital Cameras – Action Cameras

Camera hành trình

- **Action Cameras** are small and sometimes waterproof camcorders that you can mount them to bicycles, drones, helmets or body parts.
- Best choice: GoPro.



Digital Cameras - 360-degree cameras

Camera 360 độ

- **360-degree cameras** record a view in every direction at the same time.
- Best choices: Samsung Gear 360, Ricoh Theta S.

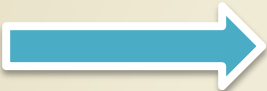


Digital Cameras - 360-degree cameras



Samsung Gear 360

record

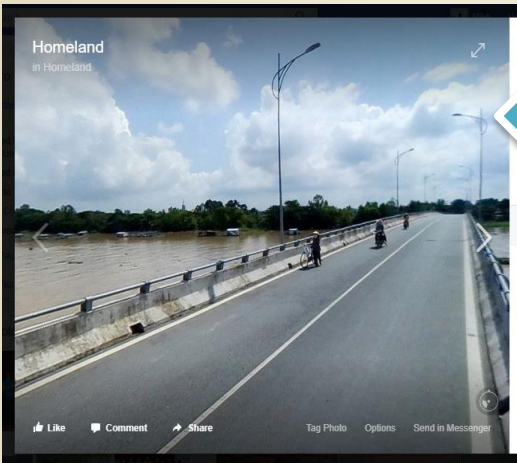
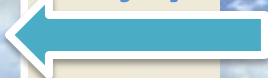


Gear
360

stitch



enjoy



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Discovering Computers 2012: Chapter 5

Digital Cameras - flycam

- **Camera drones** capture aerial photos from above.
- The *gimbal technology* allows for any vibration from the drone to not reach the camera.
- Best choices: DJI Phantom/Spark/Mavic/**Inspire**.



Voice Input


- **Voice input** is the process of entering input by speaking into a microphone
- **Voice recognition** is the computer's capability of distinguishing spoken words



Video Input

- **Video input** is the process of capturing full-motion images and storing them on a computer's storage medium

Record video on a **digital video (DV) camera** or use a video capture card to convert analog signals to digital



Connect the camera to a port on the system unit



Transfer video and images

Video Input

- A **Web cam** is a type of digital video camera that enables a user to:

Capture video and
still images

Send e-mail
messages with
video attachments

Add live images to
instant messages

Broadcast live
images over the
Internet

Make video
telephone calls

Video Input

- A **video conference** is a meeting between two or more geographically separated people



Scanners and Reading Devices



Flatbed scanner



Pen or Handheld



Sheet-fed scanner



Drum scanner

Scanners and Reading Devices

How a Flatbed Scanner Works

Step 1

Place the document to be scanned face down on the glass window. Using buttons on the scanner or the scanner program, start the scanning process.



Step 2

The scanner converts the document content to digital information, which is transmitted through the cable to the memory of the computer.

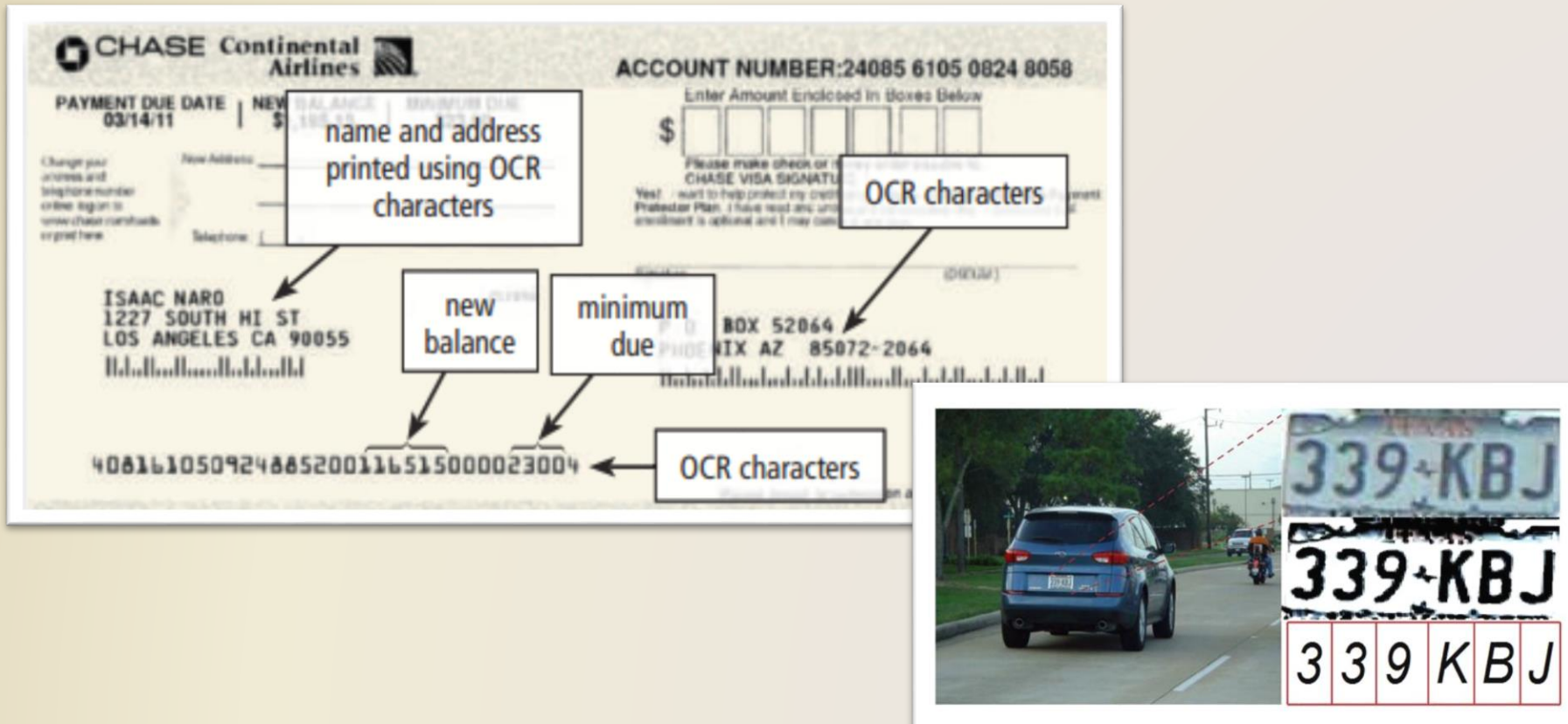


Step 3

Once in the memory of the computer, users can display the image, print it, e-mail it, include it in a document, or place it on a Web page.

Scanners and Reading Devices

- **Optical character recognition (OCR)** involves *reading characters from ordinary documents*



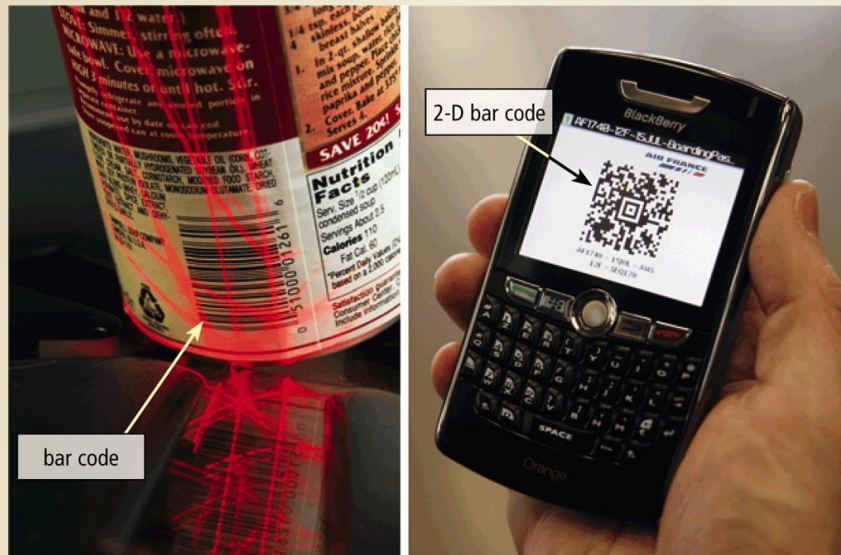
Scanners and Reading Devices

- **Optical mark recognition (OMR)** reads hand-drawn marks such as small circles or rectangles
- An OMR device scans the documents and matches the patterns of light



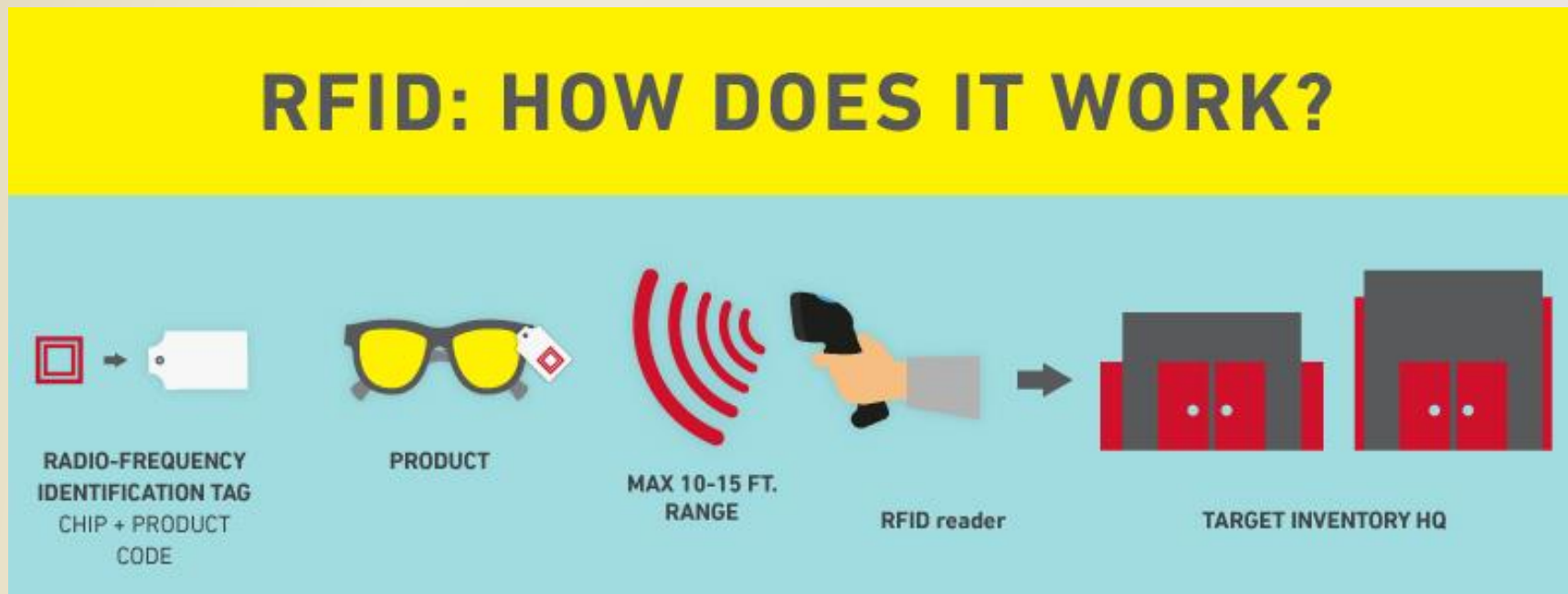
Scanners and Reading Devices

- A **bar code reader**, also called a **bar code scanner** uses laser beams to read **bar codes**



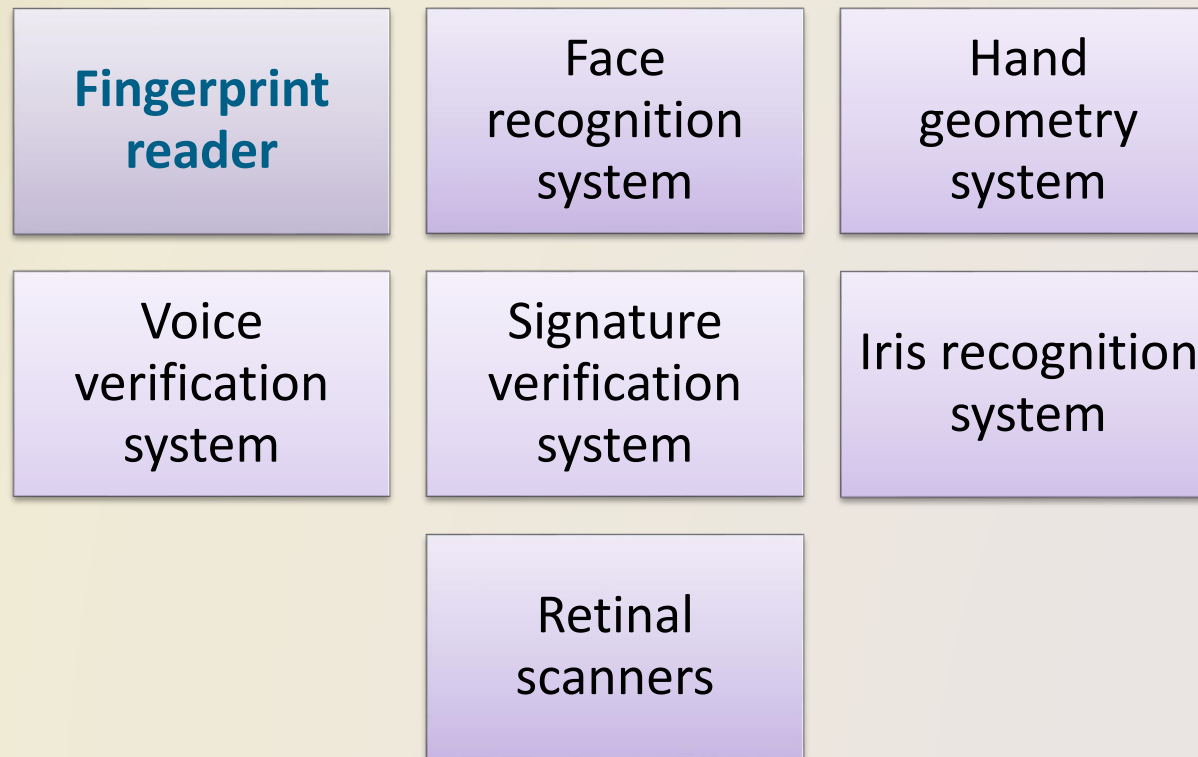
Scanners and Reading Devices

- **RFID** (radio frequency identification) uses radio signals to communicate with a *tag* placed in or attached to an object
- An **RFID reader** reads information on the tag via radio waves



Sinh trắc học

- Biometrics authenticates a person's identity by verifying a personal characteristic



Biometric Input



fingerprint
reader



hand
geometry
system



iris
recognition
system



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