Defining the User Interface

- User interface design is a subset of a field of study called *human-computer interaction* (HCI).

- **Human-computer interaction** is the **study**, **planning**, and **design** of how people and computers work together so that a person's needs are satisfied in the most effective way.

Defining the User Interface

- HCI designers must consider a variety of factors:
  - Human:
    - what people want and expect,
    - what physical limitations and abilities people possess,
    - how their perceptual and information processing systems work,
    - what people find enjoyable and attractive.
  - Computer:
    - Technical characteristics and limitations of the computer hardware and software must also be considered

Defining the User Interface

- The **user interface** is the part of a computer and its software that people can see, hear, touch, talk to, or otherwise understand or direct.

- The **user interface** has essentially two components: input and output.

  - *Input* is how a person communicates his or her needs or desires to the computer.
    - Common input components: the keyboard, mouse, and one's voice (for spoken instructions).

  - *Output* is how the computer conveys the results of its computations and requirements to the user.
    - Display screen