PRACTICAL-4- STUDY ABOUT INPUT DEVICES

Mouse

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Mouse

A mouse is something you push along your desktop to make a cursor (pointing device) move on your screen.

There are two main kinds of mice:

- Rolling rubber ball (in a ball-type mouse)
- Bouncing a light off your desk (in an optical mouse).

Advantages

- Easy to use
- Not very expensive
- Moves the cursor faster than the arrow keys of the keyboard.

Types of Mice

- Mechanical Mouse
- Optical Mouse
- Wireless Mouse
- Trackball Mouse
- gstick

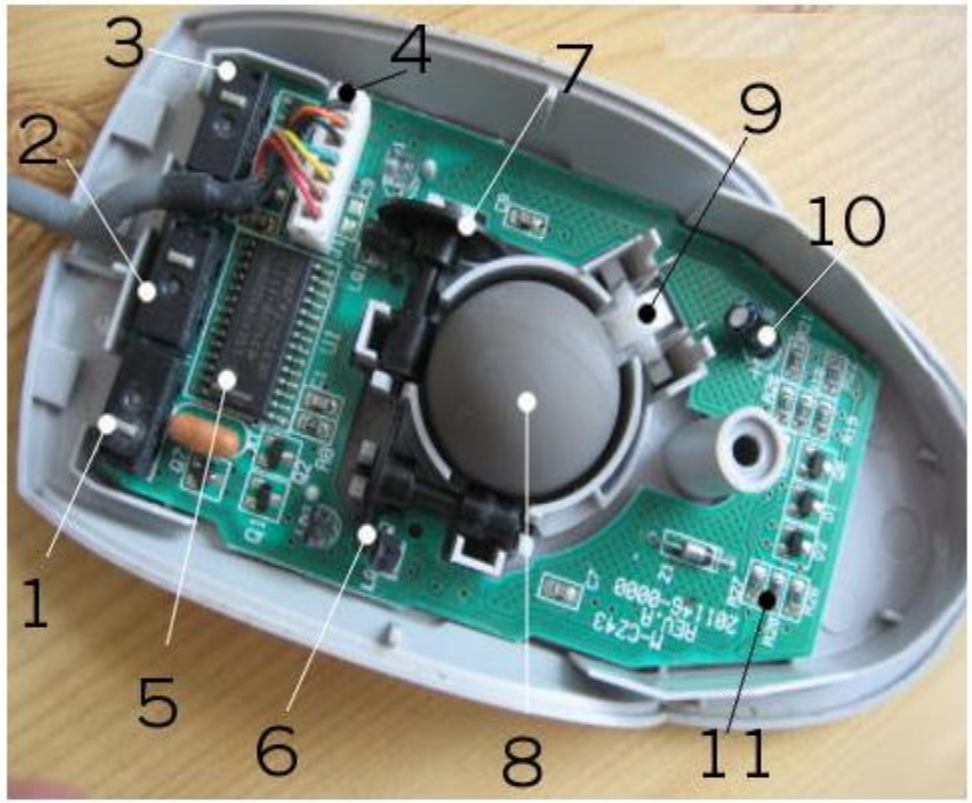
Mechanical Mouse (Ball Mouse)

- In 1972, Bill English (builder of Engelbart's original mouse) invented the ball mouse
- Integrated with an internal metal or rubber ball
- The ball in the mechanical mouse spins when it comes in contact with surface

Mechanical Mouse (Ball Mouse)

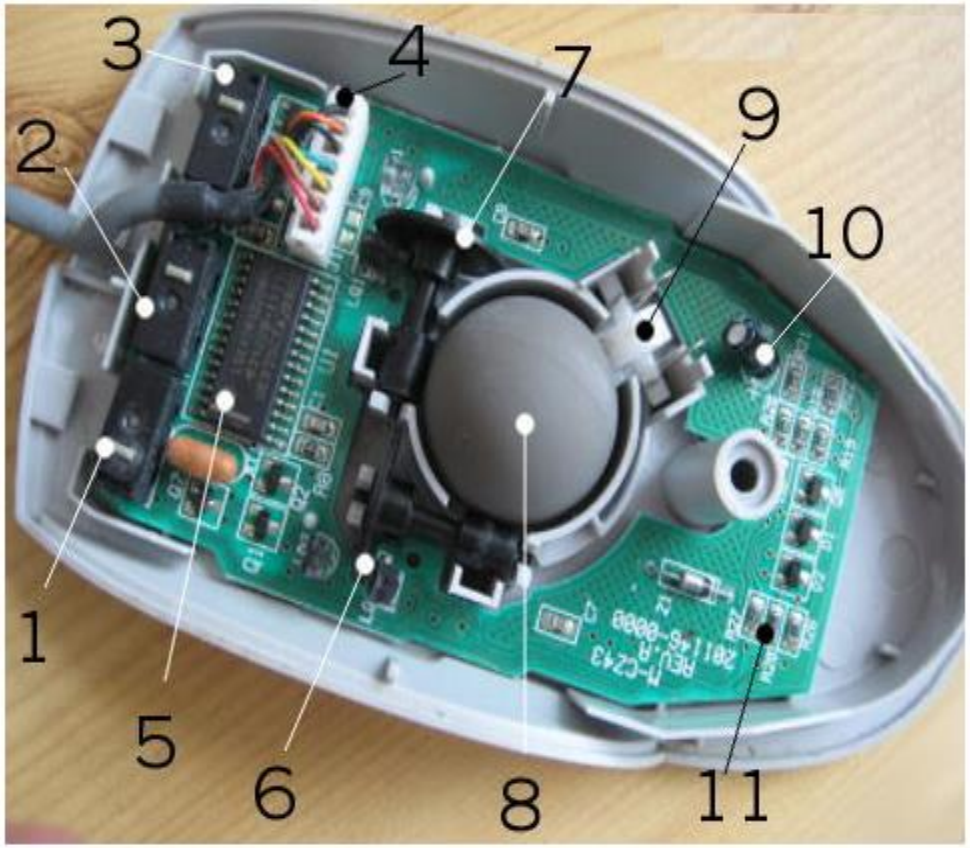
Working of different components of a Mechanical Mouse:

1. Switch detects clicks of left mouse button.
2. Switch for middle button.
3. Switch for right button.
4. Old-style connection to PS/2 socket on computer.
5. Chip turns back-and-forth (analog) mouse movements into numeric (digital) signals computer can understand.



Mechanical Mouse (Ball Mouse)

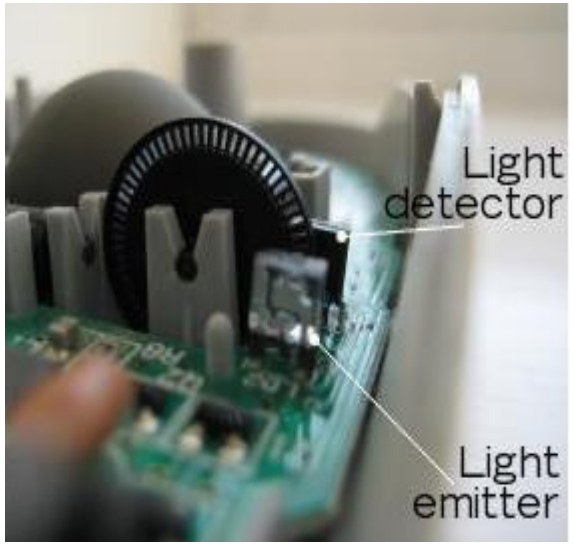
6. X-axis wheel turns when you move mouse left and right.
7. Y-axis wheel turns when you move mouse up and down.
8. Heavy rubber wheel.
9. Spring presses rubber ball firmly against X- and Y-axis wheels so they register movements properly.
10. Electrolytic capacitor
11. Resistors.



Mechanical Mouse (Ball Mouse)

Working of Mechanical Mouse:

- The ball rolls under its own weight
- pushes against two plastic rollers connected to thin wheels
- One wheel detects up-and - down movements
- The other detects side-to - side movements
- Every wheel is made up of plastic spokes



Optical Mouse

- It shines a bright light on desk
- The light bounces straight back up off the desk into a photocell (photoelectric cell), also mounted under the mouse, a short distance from the LED.
- The photocell has a lens in front of it that magnifies the reflected light

Optical Mouse

1. An LED at the back generates red light and shines it horizontally, from the back of the mouse toward the front

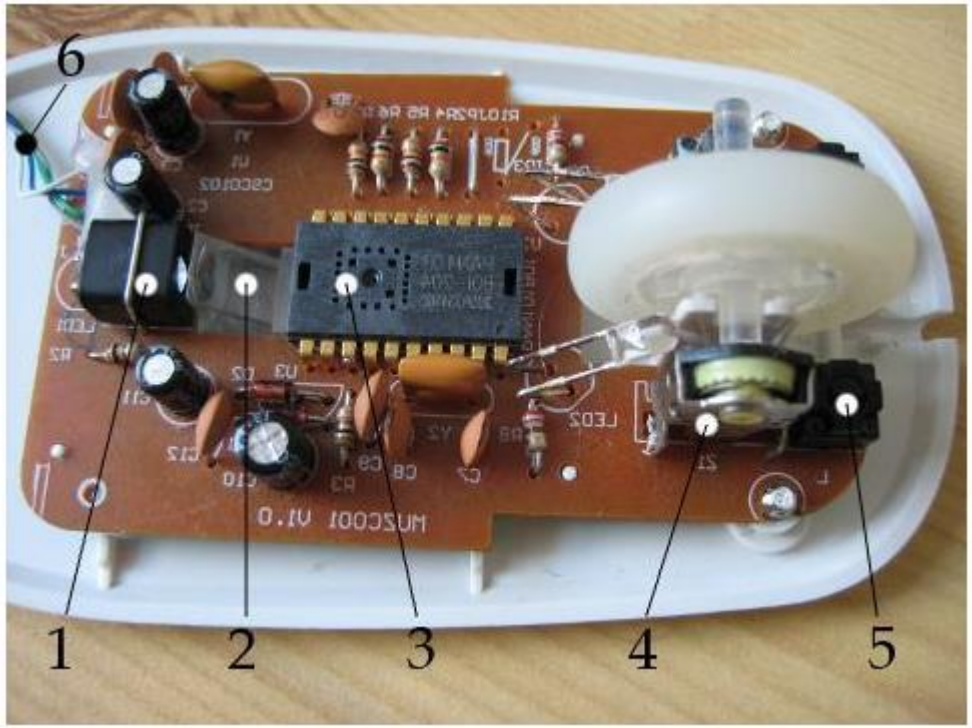
2. A plastic light guide channels the light from the LED at an angle, down onto the desk.

3. A light-detector chip measures light reflected back up from the desk

4. The scroll wheel at the front of the mouse is mounted on a switch mechanism.

5. A micro switch detects when you press the right mouse button.

6. The USB cable connection carries digital information from the mouse to your computer.



Wireless Mouse

The Mouse without wire or cord is called wireless mouse or cordless mouse

use radiofrequency (RF) technology to communicate

RF devices require two main components:

1. A transmitter
2. A receiver

A Trackball Mouse

- A trackball mouse is a pointing device. It consists of a ball held by a socket containing sensors to detect a rotation of the ball.
- The user rolls the ball with the thumb, fingers, or the palm of the hand to move a pointer.

gstick Mouse

- Gordon Stewart designed the stick to add a more authentic and natural feel to artistic manipulations on both Macs and PCs
- These mice are Wireless and pocket-sized
- Used for web browsing
- Office work

Thank You