How to Manage COM Ports in Windows

In the Windows environment, COM ports (short for communication ports) are essential for serial communication with various hardware devices such as modems, sensors, and other serial devices. Managing COM ports effectively is crucial for ensuring smooth data transmission and device communication. This article will guide you through the process of discovering, configuring, and managing COM ports using Windows tools and commands.

Examples:

1. **Discovering COM Ports via Device Manager:**
    - Open Device Manager by pressing Win + X and selecting "Device Manager."
    - Expand the "Ports (COM & LPT)" section to view the list of available COM ports.
    - Note the COM port number assigned to your device.

2. **Listing COM Ports via Command Prompt:**
    - Open Command Prompt by pressing Win + R, typing cmd, and pressing Enter.
    - Run the following command to list all COM ports:

      ```
      mode
      ```

    - This command will display a list of all available COM ports and their statuses.

3. **Configuring COM Port Settings via Device Manager:**
    - Open Device Manager and expand the "Ports (COM & LPT)" section.
    - Right-click on the desired COM port and select "Properties."
    - Navigate to the "Port Settings" tab to configure parameters such as baud rate, data bits, parity, and stop bits.
    - Click "OK" to apply the changes.

4. **Assigning a New COM Port Number:**
    - Open Device Manager and expand the "Ports (COM & LPT)" section.
    - Right-click on the desired COM port and select "Properties."
    - Navigate to the "Port Settings" tab and click on the "Advanced" button.
    - In the "COM Port Number" dropdown, select a new COM port number.
    - Click "OK" to apply the changes and close the properties window.

5. **Using PowerShell to List COM Ports:**

   - Open PowerShell by pressing Win + X and selecting "Windows PowerShell."
   - Run the following command to list all COM ports:

     ```
     Get-WmiObject Win32_SerialPort | Select-
     Object DeviceID, Description
     ```

   - This command will display a list of all COM ports along with their descriptions.