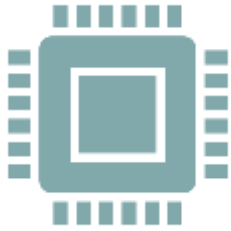# Module 2:

Computer Assembly and Disassembly

Objectives:

Learn the steps involved in assembling and disassembling of a computer.

Identify the tools for assembly and disassembly.

Learn the different safety precautions and anti-static measures.

Tools for assembly and disassembly of computer

Basic Tools

1. Screwdrivers:

Phillips Head: Most common for securing components.

Flat Head: Occasionally needed for certain screws.

2. **Pliers:**

- Needle-nose pliers for tight spaces.

- Regular pliers for gripping or twisting wires.

3. Anti-Static Wrist Strap: Prevents electrostatic discharge (ESD) that can damage components.

4. Cable Ties or Velcro Straps: For organizing cables during assembly.

- **Optional Tools**

1. **Hex Key Set**: For cases or components that use hex screws.

2. **Tweezers**: Helpful for placing small components or connectors.

3. **Suction Cup Tool**: Useful for handling screens or certain hardware without damage.

4. **Thermal Paste**: For reapplying on CPUs and GPUs if you're removing them.

- **Work Surface**

1. Anti-Static Mat: Provides a safe area to work on sensitive components.

- **Additional Items**

1. Flashlight or Work Light: To illuminate dark areas inside the case.

2. Magnifying Glass: Helpful for inspecting small parts or connectors.

- **Organizational Tools**

1. Parts Organizer: To keep screws and small parts sorted.

2. Labels: For marking cables or components if necessary.

shutterstock.com · 1774723142

• Safety Precautions

1. Power Off and Unplug:

Always turn off the computer and unplug it from the power source before starting.

2. Ground Yourself:

Use an anti-static wrist strap connected to a grounded surface. This helps prevent electrostatic discharge (ESD) damage.

3. Work in a Clean, Dry Area:

Choose a clean, clutter-free workspace. Avoid working on carpet or other static-prone surfaces.

4. Avoid Jewelry and Electronics:

Remove any metal jewelry (rings, bracelets) and avoid using electronic devices while working.

5. Handle Components by Edges:

Always hold circuit boards and components by their edges, avoiding contact with pins and circuits.

6. Be Careful with Tools:

Use insulated tools and be cautious not to short any circuits with metal objects.

7. Keep Food and Drinks Away:

Avoid spills and crumbs near your workspace to prevent contamination.

• Anti-Static Measures

1.Use an Anti-Static Mat:
1. Work on an anti-static mat designed to dissipate static electricity safely.

2.Ground Your Equipment:
1. Connect your anti-static mat to a grounded outlet or the computer case to provide a safe path for static electricity.

3.Store Components Properly:
1. Keep unused components in anti-static bags or containers until needed.

4.Limit Movement:
1. Avoid excessive movement while working, as friction can generate static electricity.

5.Control Humidity:
1. Maintain a moderate humidity level in your workspace, as dry conditions can increase static build-up.

HOW TO BUILD A COMPUTER

A STEP-BY-STEP ILLUSTRATED INFOGRAPHIC

by PC Build Advisor

- **Steps to Assemble**

1. **Prepare Your Workspace**:

2. **Gather Components**:

3. **Install the Power Supply**:
4.   **Prepare the Motherboard**:
5.   **Install RAM**:
6.   **Install the Motherboard**:
7.   **Install Storage Drives**
8.   **Install Storage Drives**:
9.   **Install Graphics Card** (if applicable):
10.   **Connect Cables**
11.   **Connect Front Panel and Peripherals**:
12.   **Organize Cables**:
13.   **Final Check**:
14.   **Power On**:

Steps to Disassemble

1. **Prepare Your Workspace**:
2. **Power Off and Unplug**:
3. **Open the Case**:
4. **Disconnect Cables**:
5. **Remove the Graphics Card** (if applicable):
6. **Remove Storage Drives**:
7. **Remove RAM**:
8. **Remove the CPU Cooler**:
9. **Remove the Motherboard**:
10. **Remove the Power Supply**:
11. **Organize and Store Components**:
12. **Close the Case**:

Assessment:

Hands-on Activity
Disassemble and Reassemble a computer system and
take a pictures/videos to submit

Thank you