Troubleshooting PC Components

At the end of this episode, I will be able to:

1. Identify common PC component issues.

Exam Objective: 5.2 - Given a scenario, troubleshoot problems related to motherboards, RAM, CPU, and power.

Description: In this episode, we will discuss issues related to PC components such as motherboards, RAM, CPUs and power supplies.

- **Motherboards**
  - Swollen capacitors
  - Socket and slot damage
  - Battery failure (RTC)
  - I/O panel damage
  - POST beeps
- **CPU**
  - Overheating/cooling failure or insufficient
  - Improper installation
  - Socket damage
  - Pin damage (PGA-based CPUs)
  - Tools
    - Monitoring software
    - CPU diagnostic software
- **RAM**
  - Memory mismatch
  - Improperly seated

- Monitoring software
  - Windows Memory Diagnostic Tool
  - Monitoring software
- **PSU**
  - Wrong input voltage
  - Failure
    - Component damage (CPU, RAM, cards, MOBO)
  - Tools
    - ATX PSU Tester
    - Multimeter
- **General symptoms**
  - Burning smell
  - Grinding noises
  - Swelling capacitors
  - Crashes (BSOD and applications)
  - Intermittent shutdowns
  - Sluggish performance
  - POST codes

- Additional Reference Materials
  HWMonitor: https://www.cpuid.com/softwares/hwmonitor.html
  Intel Processor Diagnostic Tool:
  https://www.intel.com/content/www/us/en/download/15951/intel-processor-diagnostic-tool.html