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## **Laptop Quality Assurance & Hardware Recovery (Volunteer Project)**

**Project Title:** Laptop Quality Assurance Testing & Component Salvage (Volunteer Project)

**Timeline:** July 2025 – Present

**Overview:** This hands-on project focused on applying a Standard Operating Procedure (SOP) for Quality Assurance (QA) testing of donated laptops. I worked alongside IT professionals who guided me through each step, teaching me how to inspect hardware, test system functions, and make smart decisions about reuse or recycling. This was a practical learning experience that helped me better understand IT troubleshooting, hardware testing, and salvage processes.

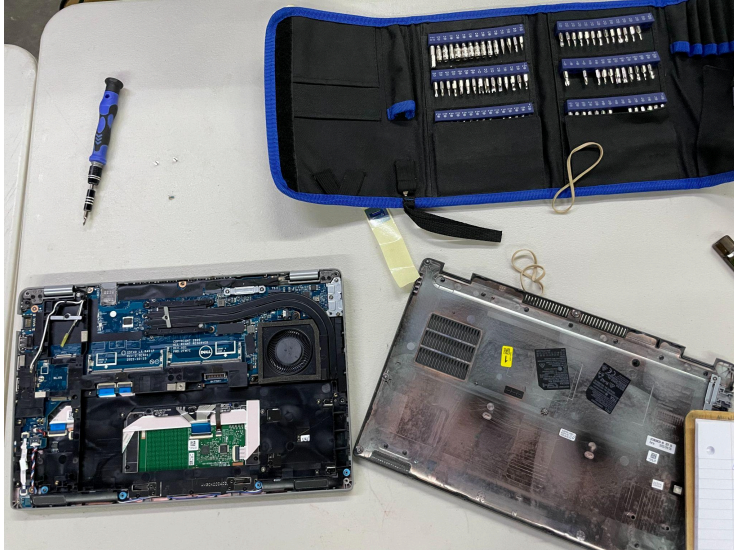
**Project Summary:** Think of this project like a doctor giving a check-up to a computer. I helped test laptops to see if they were healthy and ready for someone else to use. If a laptop had a serious issue—like a broken camera or no sound—we either tried to fix it or saved the good parts (like the battery or memory) before recycling the rest. Each step followed a checklist so nothing was missed.

### **What I Did:**

- Followed a QA checklist (SOP) to test 3 laptops for physical condition, camera, sound, microphone, and browser settings.
- On Laptop 1: Everything passed. Camera, sound, and microphone worked well. The browser was already set to Chrome.
- On Laptop 2: The camera didn't work. I attempted troubleshooting by installing a Dell update, but it didn't resolve the issue. A tech team member then installed the driver directly from Dell's website, and when that also didn't work, he approved the unit for salvage. Since this was my first time learning how to take apart a laptop, the tech professional walked me through the steps while I observed, asked questions, and took notes and pictures. He removed the working parts (battery, RAM, SSD, and network card), explained each component's function, and placed the case for recycling. It was a great learning experience.

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- On Laptop 3: Physically looked good. The camera worked but sound didn't. I ran Windows updates and changed the desktop icon for the organization's Linktree shortcut. After updating, I retested the sound with a video, and it worked!



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### **Key Terms Explained:**

- **QA (Quality Assurance):** A process to make sure things work correctly and meet standards. In tech, this means testing devices to confirm they're safe and usable.
- **Driver:** A small piece of software that helps the computer communicate with its hardware (like the camera or sound card).
- **RAM (Random Access Memory):** Like the short-term memory of a laptop—it helps run programs quickly.
- **SSD (Solid State Drive):** The part of the laptop that stores files and the operating system.
- **Network Card:** The part that lets a computer connect to Wi-Fi.

### **What I Gained:**

- Learned how to follow QA procedures and perform full system checks
- Practiced real-world troubleshooting with camera and audio issues
- Got hands-on experience disassembling a laptop and identifying reusable parts
- Learned from IT professionals about internal components and their roles
- Built confidence in documenting problems and communicating with a tech team

**Why It Matters:** This project taught me the value of careful inspection and documentation, both of which are critical in IT roles. It also gave me my first experience in hardware salvage—a process that reduces waste and saves working components for future repairs.

**Let's Connect:** If you work in QA, device management, or tech recycling, I'd love to learn from your experience and share ideas!