

# Reverse Engineering Challenge

Team: 17505A

School: IM Terrell Academy

Location: Fort Worth, TX, USA

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## Introduction:

The device our team chose to disassemble for the challenge was a Compaq Presario 1240 Laptop from 1998. We chose to take apart this device because one of our teammates had just finished building their first desktop computer, and we thought it would be fun to learn about and compare the laptop to newer systems.

# Exterior:

The dimensions of the laptop are 12.5" wide, 10" long, and 2" tall.



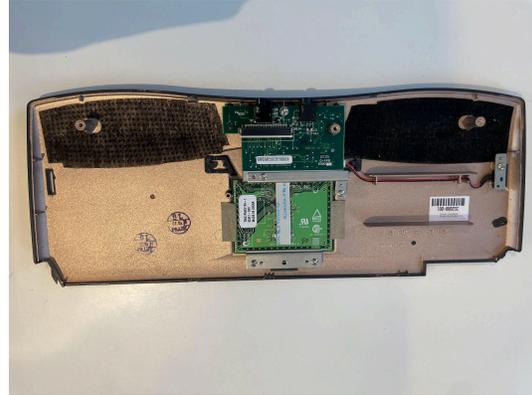
# Components:

## RAM:

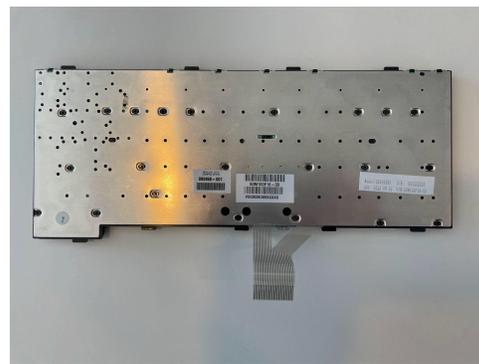


The RAM was the easiest to access, so we documented it first. The role of RAM is to temporarily store data from a program being used. RAM capacity is measured in gigabytes, however, RAM is not storage.

# Trackpad



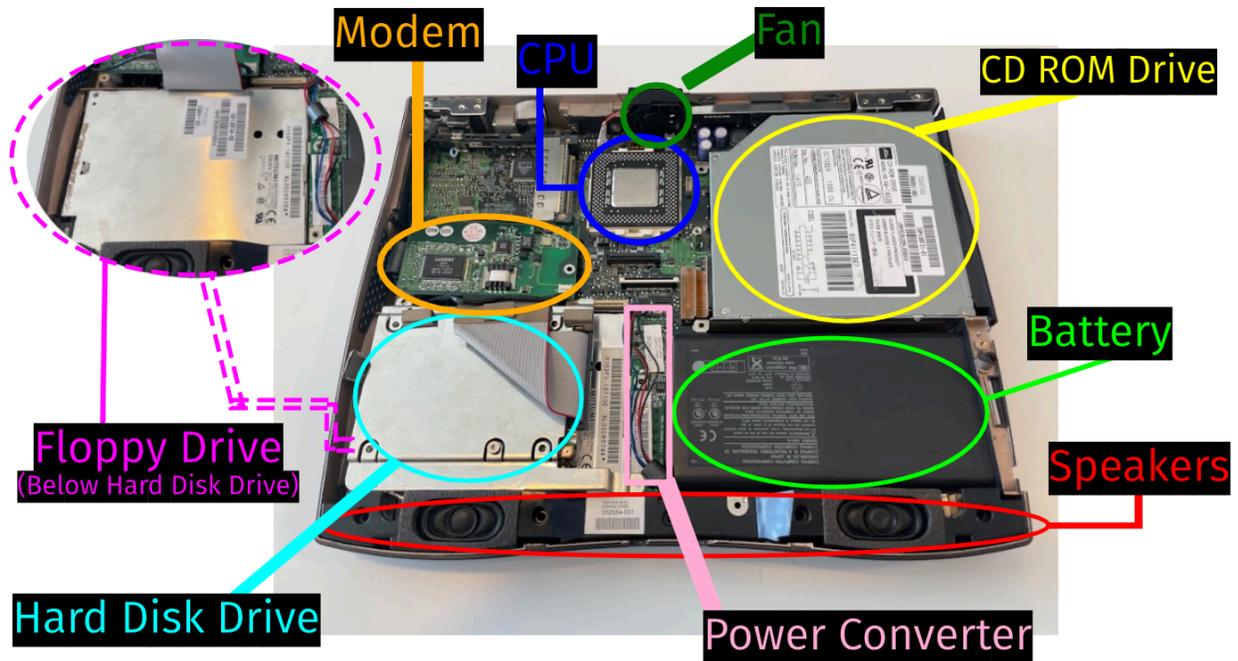
# Keyboard:



# Screen:



# Internal Components:



The components revealed by removing the trackpad and keyboard are as follows:

## Battery:

The role of the battery is to store power, from a power source, for the laptop.

## Power Converter:

The role of the power converter is to deliver the needed power to the motherboard from the battery, allowing the electronic components of the entire computer to operate.

## Hard disk drive:

The role of the hard drive is to store data such as program files or user logs in bytes. The HDD connects to the motherboard via a 20 pin SATA cable.

### Speakers:

The role of the speakers is to respond to the audio signals from the motherboard by playing sounds from applications, videos, or music.

### Floppy Drive:

The role of a floppy drive is to read data from, and write data into a 'floppy' disk that can be inserted or removed from the drive. In the 1990's, floppy disks were the preferred way to transfer data.

### Modem:

The role of the modem is to connect the laptop to the user's local area network (LAN) or the internet.

### CPU:

The CPU, or Central Processing Unit, is the brain of the computer. It is the electronic component that gives all other electronic components within the system directions to operate in accordance with the user's command.

### Fan:

The fan is a simple component, meant to prevent the CPU from overheating by blowing air over it.

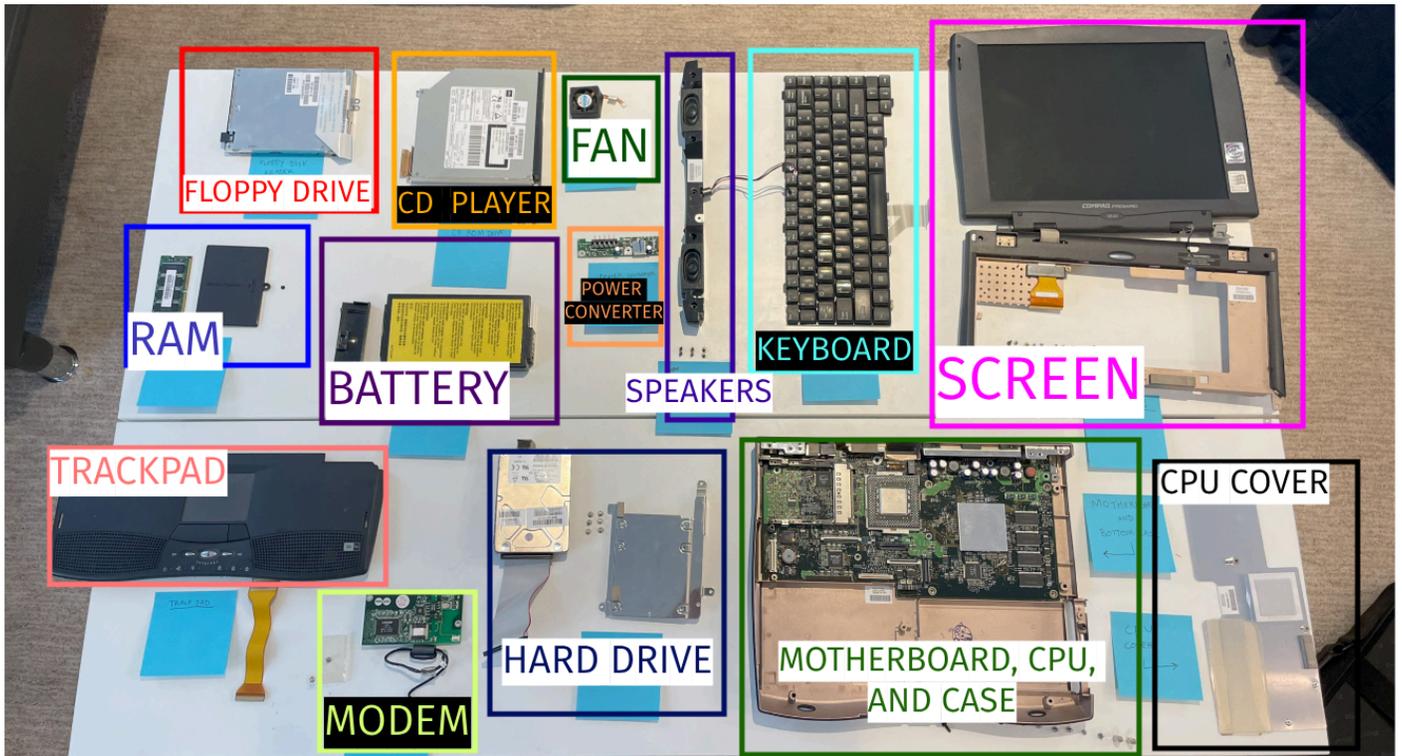
### CD Player:

Similar to the floppy drive, the CD player reads data on CD disks by spinning them. These disks can be removed or inserted by pressing a button.

### Motherboard:

The motherboard is the circuit board in which all of the aforementioned components connect to. The motherboard connects to these components with pins and other electronic connectors.

# Summary



After separating all components, we placed them on a table and labeled them each. This project was very eye opening to our team because this computer model was very similar to the devices that our parents had when they were around our age. Throughout this project we learned how a floppy drive works, and how the modem connects to a network signal. One of the biggest takeaways was that this computer had both a floppy drive, and a CD player, which surprised us because most newer laptops don't have either.

Note: The images that have been overlaid were done on Photopea.