**Instructions:**
1. Describe the five major components and architecture of a computer and the function of each component (Do not just list these components).
2. Describe five input and five output devices (Please be sure to describe and not just list the devices)
3. Some of the adverse health effects of computers include repetitive stress injuries, eyestrain and headache, and back and neck pains. We also consider the effects of electromagnetic fields and noise. Provide five ways to avoid repetitive stress injuries after exploring the websites below:
   - Kidshealth
   - EECS
   - Ergonomics

Some of the major physical components of a computer include the motherboard, the CPU, RAM, hard drive and the power supply unit.

The motherboard is the "main circuit board" of the computer, meaning that it contains all the physical parts of a computer and connects them together so they can work simultaneously (GCFGlobal, n.d.).

A computer's CPU (Central Processing Unit) is a small, thin chip that essentially gives the computer instructions to execute. For this reason, it's often referred to as "the brain of the computer" (n.d.).

The Random Access Memory (RAM) is best referred to as the "short-term memory" of a computer, and is used to store temporary data in a computer. It's super important to save your progress as you're working in applications such as word processors or a photo/video/audio editor because of how the data saved in the RAM is **deleted after the device is shut off** (n.d.).

Opposite of RAM is the hard drive, also known as the "long-term" memory (n.d.). Your hard drive is used to store important data that's saved on the computer whether it's on or off, such as software files (n.d.).

The power supply unit's function is to, well, supply the computer with power. In fact, without this component, your computer would not be able to turn on.

There are a variety of input and output devices, which I will describe below:
**Input:**
One of the most common input devices for a computer is the **keyboard**. A computer keyboard allows a user to input information onto a computer via buttons that include letters, numbers, symbols and different function/navigation keys. Typing is an important component because it allows for input of different commands as well as printing text/numbers.

**Computer mice** are used to point and click at anything on a computer to either execute it or activate a certain feature (depending on what application or software you are using).

**Pen input** is essential for any device that comes with or is compatible with a stylus, and is typically used for drawing on a screen. Aside from drawing, it can also be used as a point-and-click tool to select things on a computer.

**Web cameras** are input devices in the way that takes real-life footage and converts it digitally (GCSE ICT, n.d.). These are mostly used in online chat applications such as Discord, Skype and Zoom.

A computer **terminal** consists of a screen and a simple keyboard, primarily being used for interacting with the CPU and displaying the output (Jain, 2024).

**Output:**
The **display screen** of a computer is used to display all GUI for users to interact with via an input device, such as a mouse and keyboard.

**Speakers** are used to play audio by sending sounds to the receiver (CITE). Similarly, **headphones** take a computer's audio and send it through to a specific location so that it only plays through the speakers.

**Printers** allow you to convert digital media (text and photos) into physical media. There are different types of printers (such as photo printers) but they all use paper for displaying the physical media.

**Projectors** are an output device that displays media from a computer through certain lenses that allow the media to appear on any surface in front of it, such as a wall.

With the increasing demand of tech careers, stress injuries are more common than ever (especially for remote jobs). You can avoid **repetitive stress injuries** by doing the following:
1. Maintaining decent posture: According to Nemours TeensHealth, "[sitting] up straight" with your "feet flat on the floor" and arms to your sides can help prevent too much strain on your muscles. (Gavin, 2019)
2. Take breaks often: Give your eyes a rest. Several experts such as the NIH report that exceeding 2 hours a day on a screen can lead to health risks such as "eye strain and neck pain" (Shetty, 2024). However, given the fact that most of modern society depends on the Internet to function, I personally find it unrealistic to spend two hours or less on a screen per day (especially those employed in IT or similar careers). Therefore, taking at least 20 minute long breaks can be beneficial and can also help to reduce work burnout.
3. Buy "ergonomic" tech equipment: This can range from different keyboard layouts, monitor screens, chain cushions and more. Sometimes we can forget the correct sitting posture or may slouch out of habit (I'm guilty of this). Taking the extra steps to buy

something like a wrist rest for your keyboard can do wonders to your body (and reduce strain!)

4. Stretch: It's a great time to stretch during breaks. According to Healthline, some of the benefits of stretching daily include "[increasing] blood flow to your muscles", "[improving] posture" and can "heal and prevent back pain" (Bubnis, 2018). Because of this, stretching before and after work can help increase energy levels as well as relieving your body.

5. Regular exercise: In addition to stretching in between work sessions, exercise is vital to maintaining your peak health. Exercising on a daily basis can also help prevent risks of overstretching (Gavin, 2019).

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