Every computer has the following basic components to create a system: a “Central Processing Unit or (CPU), memory, circuit broad, storage, and input/output devices” (Bourgeois & Bourgeois, 2014). The CPU carries out commands sent to it from the software and returns the results to be acted upon, which is why the CPU is the brains of the computer (Bourgeois & Bourgeois, 2014).

There are two different choices of the manufacturer of CPU Advanced Micro Devices AMD or Integrated Electronics (Intel). The CPA will need a desktop computer for customer data and corporate clients. The solution to the manufacturer is AMD because according to (Harleen, 2020) “If we talk about Desktop, and you want to change processor, motherboard or socket’s compatibility, then Intel has fewer options available for that in comparison to AMD processor due to frequent motherboard and chipset changes.” Also, intel has higher power consumption and lower battery life (Harleen, 2020).

The tax specialist will be meeting with clients away from the office, needing a laptop. The right manufacturer is Intel because Intel’s “processor clocks higher than AMD processors” (Harleen, 2020). Even though Intel’s processors performance speeds come at a cost of higher power consumption and battery life, the “short workloads and single-core boosts especially in laptops” (Harleen, 2020).

The data-entry specialist will be meeting clients who walk in the door to their company. The right digital device for data-entry specialist is a desktop computer. The right manufacturer of the CPU is AMD because of their “Price to Performance is higher compared to similar Intel Processors”. Latest AMD Ryzen processors have low energy and power utilization and AMD are immune to exploits which can affect intel processors like meltdown, spoiler, and has lower impact on mitigation of Spectre (Tarandeep, 2020). Spectre is a class of security vulnerabilities that affects modern microprocessors that perform branch prediction and other forms of speculation.

The motherboard connects with the CPU, memory, and storage components. According to (Bourgeois & Bourgeois, 2014) “The bus is an important determiner of the computer’s speed: the combination of how fast the bus can transfer data and the number of data bits that can be moved at one time determine the speed.” Motherboards video and sound processing are integrated components in the motherboard (Bourgeois & Bourgeois, 2014).

For the motherboards of CPA, tax specialist, and data-entry specialist I would use standard ATX motherboards. This motherboard offers more expansion slots, up to four slots for RAM, and offer USB connection (Raj, 2020). This will help support the data that employees are entering and transport data to higher branches of the company.

The next hardware component in the laptop computer is the RAM, which is the short-term memory. According to (Bourgeois & Bourgeois, 2014) “When a computer starts up, it begins to load information from the hard disk into its working memory.” RAM transfers data much faster than the hard disk. Programs load into RAM for processing programs running on a computer. Some amount of RAM must be installed in order for a computer to work effectively (Bourgeois & Bourgeois, 2014).

For the CPA’s RAM in their computers they will need more than the tax specialist and data-entry specialist because they are receiving both tax returns from tax specialist and data-entry specialist. The CPA will need 16GB of RAM to use more Dynamic Random Access Memory (DRAM) which is slow memory and use Static Random Access Memory (SRAM) which is fast memory but is more expensive and in a little cache, leaving us to use more DRAM (John, 2017). Also, “RAM is generally installed in a personal computer through the use of a dual-inline memory module (DIMM)” (Bourgeois & Bourgeois, 2014). The CPA and Data-entry specialist will both need a PC DIMM for RAM stick for their workstations, desktop computers, and servers for the company.

The tax specialist and data-entry specialist will only need 8GB of RAM for their computers because they don’t require as much data as the CPA because they are entering data and verifying the tax returns are correct. Connecting the devices DRAM, SRAM, and ROM together is the bus. “The bus allows information to move from one component to another” (John, 2017). Tax specialists will need a SO-DIMM for their laptops and to connect to servers in the company.

Another component of hardware is the long-term memory which have two solutions the Hard Disk Drive (HDD) or Solid-State Drive (SDD). According to (Bourgeois & Bourgeois, 2014) “Most of today’s personal computers use a hard disk for long-term data storage.” The SDD uses flash memory which is much faster than the spinning disks and are lighter and more efficient, but SDDs are more expensive than HDDs (Bourgeois & Bourgeois, 2014).

The CPA will need SSD and HDD for faster speeds according to (Bourgeois & Bourgeois, 2014) by “using the SSD for the most accessed data (such as the operating system) while using the hard disk for data that is accessed less frequently.” Tax specialists will need the SDD for the laptops so it makes them easier to use by light weight and more efficient use (Bourgeois & Bourgeois, 2014). Data-entry specialist will need an HDD because they are only entering data for customers and it will be less expensive for the company.

The peripherals for the Certified Public Accountant (CPA) are keyboard and mouse for input from the user. Then, monitor and printer for the output to help the CPA know what the system is doing with the input. The printer will be helpful to print out the tax returns filled out by the tax specialist and data-entry specialist employees and help print out tax returns for corporate clients. The CPA will also need another output device like speakers for talking to corporate clients about tax returns. The peripherals that a tax specialist will need are input devices such as keyboards and mouses. The output device the tax specialist will need are monitors and printers, for printing out tax returns. The peripherals for data-entry specialist are input devices such as keyboards, mouses, and scanners for inputting documents into a computer. The output devices are monitors and printers.

For software programs in the office of CPA we will need Monday.com because the CPA needs to communicate with corporate clients, tax specialist, and data-entry specialist if something should happen during tax returns like the tax returns not being filled out or incorrect information in an entry. The CPA will also need Smartsheet for the spreadsheets and charts so they can better plan budgeting to corporate clients. Last project management tool the CPA will need is Zoho projects so that corporate clients can share their preferences and needs to the CPA. HCI impacted my choice of software programs like Monday.com for CPAs because it will make it easier for CPAs to communicate with tax specialists. HCI also impacted my choice of software programs because of software programs like Smartsheet and Zoho projects it will make it easier for CPAs when dealing with corporate clients. According to (Gilbert, 2017) “highly-customizable platform that you can modify to fit your needs and preferences.” Also, for Smartsheet it will help the user operate “file sharing, team discussion, visual timelines, and automated workflow capabilities. This web-based application is perfect for monitoring and tracking your company’s schedule, inventories, and finances, among others” (Gilbert, 2017).

Tax specialists will need software programs such as Monday.com so that CPA and tax specialist can communicate about the customer’s tax returns. Tax specialist will need wrike.com for entering in data helping “task management, task prioritization, real-time newsfeed, interactive timeline (Gantt chart), and workload management. These tools help both distributed and co-located project teams to work speedily and efficiently” according to (Gilbert, 2017). The tax specialist will also need the software program tool of ConnectWise manage as this will help with customer service by time tracking and billing features. HCI impacted my choice of software programs for tax specialist because the Monday.com will make it easier on the user to communicate business such as “streamlining contribution, helping teams and departments work, and collaborate most efficiently” (Gilbert, 2017).

The data-entry specialist will need software programs such as Smartsheet for spreadsheets and charts to enter customer data that they can share on the software program with tax specialist so they can review them. The one other software program tool data-entry specialist can use is Celoxis which according to (Gilbert, 2017) can have protocols, customizable fields for entry, and routing rules in place for different level of access which can be used for a security product. HCI impacted my choice of data-entry specialist because a software program like Celoxis has the capabilities to set protocols and routing rules, that way the user has an easier time sending data to the right place in the company.

For administration and password protection to the company will be by careful password and email control by using disciplined use of the computer systems (Internet Security, 2017). The emails to company accounts will be controlled by the firewalls protecting against phishing emails and spam. According to (Internet Security, 2017) staying a step ahead of attacks can be done by “installation and upgrading of firewalls between internal networks and the Internet.” For access protection according to (Internet Security, 2017) “A person can then take the appropriate steps to deal with that particular incident, such as blocking network access to the unauthorized party or removing the malicious virus program from networked computers.” The way to verify the user in the company will be by Security questionnaires, such as personal questions of information only you would know. Secure socket layer protocol (SSL) and transport layer security (TLS) are the first line of defense when sending usernames, emails, and passwords over the Internet. When you are logged into the company system successfully the system lets you know by the URL designation such as https which tells the user of the computer the channel is trusted and safe for communication (John, 2017).

For security of the company and different levels of access and authorizations, the solution to protecting the company is using a next generation firewall because according to (Firewall, 2017) firewalls “include web application firewalls, user identity integration, and intrusion detection/prevention.” Data-entry specialist will need their own routers and modems for their data and so that they don't have access to tax returns once they are turned into tax specialist. CPAs and tax specialists will need to share a modem and router for constant communication of taxes for the company.

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