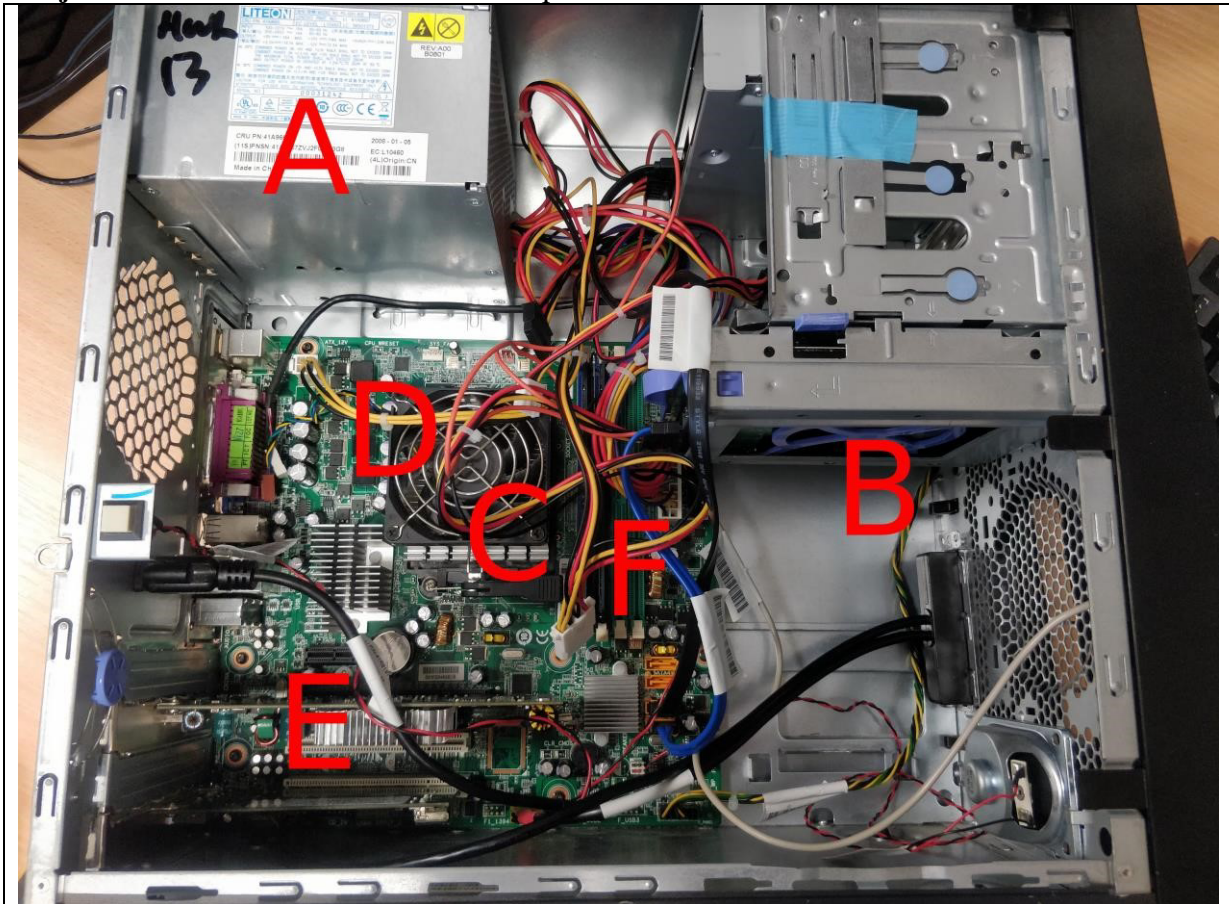


Practical 1

Computer Hardware Research

Part A

Objective: Name and describe each component



| Label | Name each component | Description |
|-------|---------------------|--|
| A | PSU | Responsible for supplying the voltage/power that the pc needs to run |
| B | Hard Drive | Responsible for storing the information on the device |
| C | CPU Fan | Responsible for keeping the CPU cool so it doesn't overheat |
| D | CPU | Responsible for processing the PC's functions |
| E | GPU | Responsible for outputting the PC's graphics to the monitor/tv |
| F | RAM | RAM is responsible for storing the currently active memory such as Operating systems for example |

Practical 1

Computer Hardware Research

Part B

Objective

Compare a pre-assembled system and the components that could be assembled to build a comparable system. After completing this practical, you should be able to:

- Identify the components of a pre-assembled system
- Locate prices for components needed to assemble a comparable system
- Compare the cost of a pre-assembled system and a self-assembled system.

If you can't find exact match for components, find the closest possible substitute. Use the Internet and available computer-related publications as your sources for information.

Examples of websites for computer parts www.komplett.ie, www.dell.ie, www.custompc.ie
www.amazon.de

MAKE SURE TO INCLUDE VALID LINKS TO WEB REFERENCES

| | Pre-Assembled Computer Package | Computer Package Components |
|---|---|---|
| CPU | Intel® Core™ i3-12100 Processor *Link* | Intel® Core™ i3-12100 Processor *Link* |
| Storage / Memory | | |
| RAM | 8 GB DDR4 (3200 MHz) *Link* | 8 GB DDR4 (3200 MHz) *Link* |
| Hard Drive | 1 TB HDD (7200 rpm) *Link* | 1 TB HDD (7200 rpm) *Link* |
| Input/Output | | |
| Keyboard | Logitech MK270 Wireless | Logitech MK270 Wireless Keyboard |
| Pointing Device | Keyboard and Mouse Combo *Link* | and Mouse Combo *Link* |
| Monitor | HP M24f Ultra-slim Monitor *Link* | HP M24f Ultra-slim Monitor *Link* |
| Speakers | Logitech Z150 PC Speakers *Link* | Logitech Z150 PC Speakers *Link* |
| Network Adapter | Intel Wi-Fi 6 *Link* | Intel Wi-Fi 6 *Link* |
| Bundled Software (Including Operating System) | Windows 10 home *Link* | Windows 10 home *Link* |
| Total Cost | €708.65 | €592.33 |

Practical 1

Computer Hardware Research

Part C

Objective

You have been asked by a family friend to assist them with a computer purchase. They're unfamiliar with technology and the terms used and have presented you with two alternatives machine choices. They would like to be able to write word documents, surf internet and play Minecraft © Mojang and Half-Life © Valve Software. They are considering playing Fortnite but are not sure yet, as it depends on machine cost and if they can extract some money from their Bitcoin wallet.

Compare Personal Computer Option A and B in relation to each of the side headings and recommend a system and any alterations.

| | Personal Computer Option A | Personal Computer Option B |
|--------------|-------------------------------|---------------------------------|
| CPU | 2.2 GHz Intel Celeron 450 | 3.2 GHz Intel Core i5 |
| Memory | | |
| Cache | 512 KB Cache | 4 MB Cache |
| RAM | 4 GB RAM | 8 GB RAM |
| Hard Drive | 320 GB Hard Drive DVD+/- | 1 TB Hard Drive |
| CD | RW drive | DVD+/-RW drive |
| ROM/DVD | | |
| Input/Output | | |
| Keyboard | USB multifunction | wireless multifunction |
| Pointing | keyboard USB optical | keyboard wireless optical |
| Device | mouse 20" HD flatscreen | mouse 25" HD flatscreen |
| Screen | monitor | monitor |
| Speakers | Multimedia Speaker System | Dolby Surround Sound Speakers |
| Network | Integrated 10/100/1000 | Integrated 10/100/1000 Ethernet |
| Adapter | Ethernet | |

Recommendations:

I would personally recommend PC option B if it's possible within the budget for your desired uses for it, PC A will be fine for general web surfing however it will massively struggle when it comes to running games such as Half Life and Fortnite and if you are looking to play these games I would highly recommend you purchasing a GPU for the PC too. PC B massively out performs PC option A. It has a better speaker system, more storage on the hard drive, double

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Computer Hardware Research

the RAM, 8 times the cache size, it has a DVD and RW drive whereas PC A only has the RW drive and the CPU is much more efficient on PC B than on PC A.

Your Recommend System

| | |
|---------------------|----------------------------------|
| | Personal Computer Recommendation |
| CPU | 3.2 GHz Intel Core i5 |
| Memory | |
| RAM | 8 GB RAM |
| Hard Drive | 1 TB Hard Drive |
| SSD Drive | Fanxiang S101 256GB SSD |
| Input/Output | |

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| | |
|-----------------|---|
| Keyboard | Logitech MK270 Wireless Keyboard and Mouse Combo Acer KG241YAbii Logitech G432 Wired Gaming Headset Integrated 10/100/1000 Ethernet GTX 1050 TI |
| Pointing Device | |
| Screen | |
| Speakers | |
| Network Adapter | |
| GPU | |

Hand up this practical report at the end of session and ensure it has been checked

| | | | |
|---------------------|--------------------|-----------------------|------------------|
| Student Name | Aaron Doyle | Student Number | C00272515 |
| Date | 20/9/22 | Checked | |
| Group | A | | |