# Part A

**Objective:** Name and describe each component

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| --- | --- | --- |
|  | | |
| Label | Name each component | Description |
| A | Power supply | Provide power to system |
| B | Hard Drive | Store Data |
| C | CPU | Process Functions |
| D | CPU Cooler | Cool CPU |
| E | GPU | Graphics processor |
| F | RAM | Used for temporary storage |

# 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:

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

If you cannot 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,](http://www.komplett.ie/) [www.dell.ie,](http://www.dell.ie/) [www.custompc.ie](http://www.custompc.ie/) [www.amazon.de](http://www.amazon.de/) . Assume that lecturer will be building the custom system and will need to know the exact components you have chosen.

MAKE SURE TO INCLUDE VALID LINKS TO WEB REFERENCES

|  |  |  |
| --- | --- | --- |
|  | **Pre-Assembled Computer**  **Package**  **(Including URL)** | **Custom**  **Components**  **(Including URL)** |
| **CPU** | [DellPc](https://www.dell.com/en-ie/shop/desktop-computers/new-optiplex-small-form-factor/spd/optiplex-7010-small-ff/s015o7010sff_vp)  I5 13500 | [Ryzen 5700G](https://www.amazon.de/-/en/AMD-Ryzen-5700G-Radeon-Graphics-multicoloured/dp/B091J3NYVF/ref=sr_1_3?crid=2WRE4CKL7CS5V&keywords=AMD%2BRyzen%2B7%2B5700X&qid=1694619900&sprefix=amd%2Bryzen%2B7%2B5700x%2Caps%2C475&sr=8-3&th=1) [Asus Prime B450-Plus](https://www.amazon.de/B450-Plus-Motherboard-Socket-Memory-natives/dp/B07F6ZXNXK/ref=sr_1_1_sspa?crid=SZKKZSAUGIMO&keywords=ASUS%2BPrime%2BB550-Plus%2BGaming%2BMotherboard%2BSocket%2BAM4&qid=1694620074&sprefix=asus%2Bprime%2Bb550-plus%2Bgaming%2Bmotherboard%2Bsocket%2Bam4%2Caps%2C46&sr=8-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&th=1) |
| **Storage / Memory** |  |  |
| RAM      Hard Drive | 1x 16gb DDR4      512GB M.2 2280 | [2x8GB ddr4](https://www.amazon.de/-/en/Crucial-3200MHz-3000MHz-2666MHz-CP2K16G4DFRA32A/dp/B08C53LL9J/ref=sr_1_1?crid=1KYWML8BGZCU0&keywords=2x16gb%2Bddr4&qid=1694620356&sprefix=2x16GB%2Caps%2C54&sr=8-1&th=1)  [Crucial p3 plus m.2 2tb](https://www.amazon.de/-/en/Crucial-Plus-PCIe-Gen4-Internal/dp/B0B25ML2FH/ref=sr_1_12?crid=2UCWKEMB4ZADJ&keywords=1tb%2Bssd&qid=1694990320&sprefix=1tb%2Bssd%2Caps%2C57&sr=8-12&th=1) |
| **Input/Output** |  |  |
| Keyboard  Pointing Device  Monitor  Speakers  Network Adapter | Dell Pro wireless keyboard  and mouse | [Logitech g 502 hero mouse and g213 keyboard](https://www.amazon.de/-/en/Logitech-High-Performance-Optical-Prodigy-Keyboard/dp/B07W6GJWZQ/ref=sr_1_5?crid=3MBT8UV63M4SX&keywords=logitec+mouse+and+keyboard&qid=1694990874&sprefix=logitec+mouse+and+keyboard%2Caps%2C47&sr=8-5) |
| **Other Components** | PSU 180W small form  bronze | [Mars gaming mcn2 atx case](https://www.amazon.de/-/en/Gaming-MCN2-Window-Grille-Chamber/dp/B0BN6MKXVB/ref=sr_1_5?crid=276M8H624C36X&keywords=atx+case&qid=1694990493&sprefix=ATX+%2Caps%2C73&sr=8-5)  [Corsair tx650M power supply](https://www.amazon.de/-/en/Certified-Semi-Modular-Connection-Operation-Capacitors/dp/B097F3PYMW/ref=sr_1_15?crid=2JPGNMQC0EDP7&keywords=atx%2Bpower%2Bsupply%2B650w&qid=1694990642&sprefix=atx%2Bpower%2Bsupply%2B%2Caps%2C59&sr=8-15&th=1) |
| **Bundled Software**  (Including Operating System) | Windows 11 pro | [Windows 11 pro](https://www.productkeys.ie/product/windows-11-professional-retail/?utm_source=Google%20Shopping&utm_campaign=BuyKeys-GoogleFeed&utm_medium=cpc&utm_term=160125&gclid=Cj0KCQjwx5qoBhDyARIsAPbMagCKiIUfV9JxkjFjJ1DOOccM419l5bdezE3hZuhpHzXyPW_uH7jZZe0aArsbEALw_wcB) |
| **Total Cost** | €809.48 | €708.43 |

# 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 Fortnight 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  RAM  Hard Drive  CD ROM/DVD | 512 KB Cache  4 GB RAM  320 GB Hard Drive DVD+/-RW drive | 4 MB Cache  8 GB RAM  1 TB Hard Drive  DVD+/-RW drive |
| Input/Output |  |  |
| Keyboard  Pointing  Device  Screen  Speakers  Network Adapter | USB multifunction keyboard  USB optical mouse  20’’ HD flatscreen monitor  Multimedia Speaker System  Integrated 10/100/1000 Ethernet | wireless multifunction keyboard wireless optical mouse 25’’ HD flatscreen monitor  Dolby Surround Sound Speakers Integrated 10/100/1000 Ethernet |

|  |
| --- |
| **Recommendations** |
| Computer B is the better choice as its CPU if faster which will help with completing tasks and processes combined with more memory and storage which will allow them to download more games and apps and increased memory will allow those games run at higher settings.  Larger monitor and surround sound speakers will provide a more immersive experience.  Wireless keyboard and mouse will remove cables from the setup and make it more accessible.  Computer B will be more expensive but will also be much more capable of running more games. |

## Your Recommend System

|  |  |
| --- | --- |
|  | Personal Computer Recommendation |
| **CPU** | I5-12400 |
| **Memory** |  |
| RAM      Hard Drive      SSD Drive | 2x8gb            2tb |
| **Input/Output** |  |
| Keyboard    Pointing  Device    Screen      Speakers      Network  Adapter    GPU | Based on preference – preferably wireless    Based on preference – preferably wireless      1080p 24-27 inch      Audiophile headphones            1660 super |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Name** | **Karolis Grigaliunas** | **Student Number** | **C00287940** |
| **Date** |  | **Checked** |  |
| **Group** | **A / B** |  |  |