Computer Systems

Assignment 2

Unit 2

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Introduction

I have been asked by Mr Ramachandra to suggest different computer systems for his business to use. The machines would need to be able to run software to build his website, edit images, manage databases, manage finance, and print documents. In order of price, here is a list of systems that Mr Ramachandra could invest in for his company:

System One: Dell XPS Tower

This system has the following specs:

- CPU – 11th Generation Intel Core i5-11400
- RAM – 8GB DDR4
- GPU – NVIDIA GeForce GTX 1650 Super with 4GB of GDDR6
- Storage – 265GB NVME M.2 SSD
- Ports – x1 Optical drive, x1 SD card slot, x1 Headset jack, x7 USB 3.1 Type-A, x2 USB 2.0 Type-A, x1 USB 3.1 Type-C, x3 Audio ports (5.1 channel), x1 DisplayPort 1.2, x1 Ethernet
- Operating System – Windows 11 Pro - compatible with all Office programs, Photoshop, and tools such as Bootstrap or Dreamweaver for web design.

The overall cost of this system is £946.90.

Pros:

- Powerful GPU for image editing and rendering
- Numerous ports for all types of peripherals
- Competitively priced

Cons:

- Not easily portable
- Needs an external display
- Limited upgradeability because of propriety Dell hardware

System Two: MacBook Pro 16-inch 2021

This system has the following specs:

- CPU – Apple M1 Pro with 10-core CPI, 16-core GPU, and 16-core Neural Engine
- RAM – 16GB Unified Memory
- GPU – Apple M1 Pro
- Storage – 1TB SSD (or 512GB SSD for -£200)
- Ports – x3 Thunderbolt 4, x1 HDMI, x1 SDXC, and x1 MagSafe 3
- Operating System – macOS 12 (Monterey), - compatible with all Office programs, Photoshop, and tools such as Bootstrap or Dreamweaver for web design.

The overall cost of the system is £2,599.00.

Pros:

- Very portable
- High performance and powerful
- Great for productivity – especially image editing
- High storage capacity for database and image storage

Cons:

- Quite costly
- Limited ports – no USB A ports
- Not as compatible with apps as Windows

System Three: Mac Pro

This system has the following specs:

- CPU – 3.5GHz 8-core Intel Xeon W processor, Turbo Boost up to 4.0GHz
- RAM – 32GB DDR4 ECC
- CPU – Radeon Pro W5500X with 8GB of GDDR6
- Storage – 1 TB SSD
- Ports – x4 Thunderbolt 3, x2 USB 2.0 Type-A, x1 headphone jack, x2 HDMI, x2 10-gig Ethernet
- Operating System – macOS 12 (Monterey), - compatible with all Office programs, Photoshop, and tools such as Bootstrap or Dreamweaver for web design.

The overall cost of the system is £6,099.00.

Pros:

- Very powerful machine
- Can be further spec'ed out to perfectly match your needs
- Decent range of ports

Cons:

- Very expensive
- Needs an external display which adds to the costs
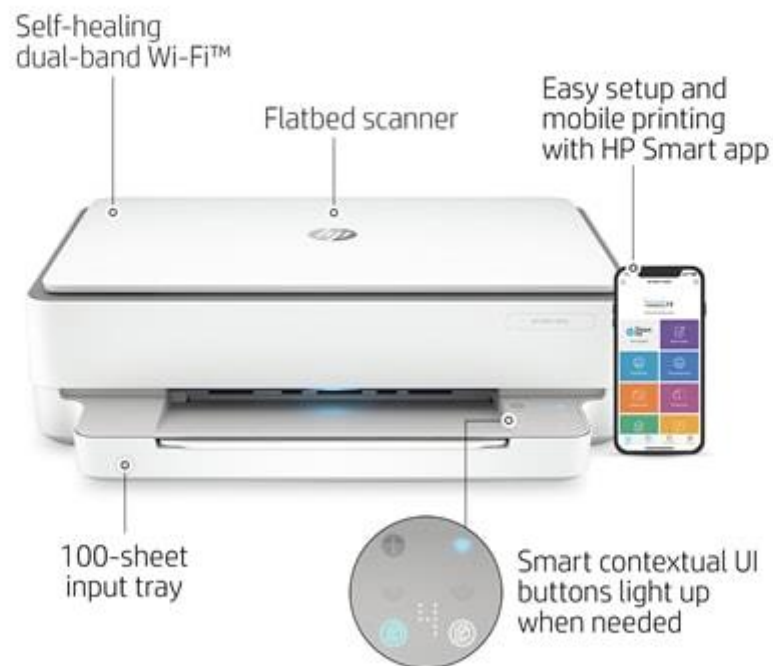- Not as compatible with apps as Windows

display not included

Printer: HP ENVY 6055 All-in-One

This printer allows you to print, copy and scan. It can print quickly and is HP Instant Ink eligible meaning HP will send you ink once you run low (providing you pay for the subscription).

The overall cost of this device is £129.99.

Recommendation and Justification: which one should he buy?

In my opinion, the best device for his use-case is my second suggested system: the MacBook Pro 16-inch 2021. It is a powerful but portable system that is at a reasonable, maybe slightly expensive, price. Due it is portability and size it can easily be taken wherever Mr Ramachandra needs to go as it will fit in a simple backpack.

With the new M1 Pro chip, it will be able to handle image editing, sorting out finances and managing databases with ease. It has a high storage capacity meaning it will be able to store everything Mr Ramachandra would need to store, such as images and company information. Whilst the price may be more expensive than my first suggestion, it is future proofing for the next few years as with the M1 Pro chip and 16GB of Unified Memory, this machine will be able to run newer applications and handle more intensive tasks for years to come.