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Description automatically generatedCloud service models

There are three recognised **cloud service models.** These cloud service models would be deployed depending on the need of the organisation.

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| **Software as a Service (SaaS)** | The cloud service provider hosts the applications that the end users need. Access for the end user is provided over the internet. End users configure applications to meet their own requirements.  Common examples include Google Workspace, Google Drive, Microsoft OneDrive, and web-based email. |
| **Platform as a Service (PaaS)** | The cloud service provider hosts the hardware and software platform that the client needs on its own infrastructure. This provides a platform upon which clients can build and deploy their own applications. Access for developers is provided over the internet.  Common examples include Google App Engine and Microsoft Azure. |
| **Infrastructure as a Service (IaaS)** | The cloud service provider sets up and manages the infrastructure (storage, servers, networking) on behalf of their clients. Access for clients is provided over the internet. IaaS typically includes virtual servers running on shared physical servers that are managed by the cloud service provider.  Common examples include Amazon Web Services and Google Compute Engine. |

# Task 1

Use the internet to research some advantages and disadvantages of each cloud service model.



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|  | **Advantages** | **Disadvantages** |
| **Software as a Service (SaaS)** | Flexibility  Scalability | Training requirement  Data security |
| **Platform as a Service (PaaS)** | Cost reduction  Customisation | Runtime issues  Data security |
| **Infrastructure as a Service (IaaS)** | Ease of use  Cost reduction | Limited customisation  Less control |

# Task 2

# Read through each of the scenarios and make a suggestion about which cloud service model would be most appropriate for the given situation.

# Scenario 1.

A college needs students and lecturers to be able to save documents to a central location so that they can be accessed at home and at college. Students and lecturers also need access to applications such as word processing, spreadsheets, and webmail to support them in their work. Which cloud service model would be most suitable for the college?

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| Software as a Service (Saas). Students and lecturers only require access to cloud storage and online applications. They could use Google Cloud for storage and Google Workspace (or similar) to provide the software they need, such as word processing software. |

# Scenario 2.

A healthcare company specialises in processing high-quality medical images. They have recently been awarded a new, large contract which means their current hardware and servers are not sufficient. Which cloud service model would be most suitable for them to quickly upgrade their systems?

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| Infrastructure as a Service (IaaS). The healthcare company needs a quick solution to upgrade their hardware and servers to deal with the processing needs of the new contract. A solution such as Amazon Web Services would provide the infrastructure they need quickly. |

# Scenario 3

A software development company has teams of software engineers that work on a wide range of projects that run on different platforms (e.g. web developments, mobile apps, etc.). The software company wants to be able to get to work on a project quickly without having to set up a specific environment every time they win a new contract. Which cloud service model would be most suitable for the software development company?

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| Platform as a Service (PaaS). The software company wants the ability to be able to start developing quickly without having to spend time setting up and configuring a new platform for every new project. PaaS can be quickly adapted to meet the needs of the company. |