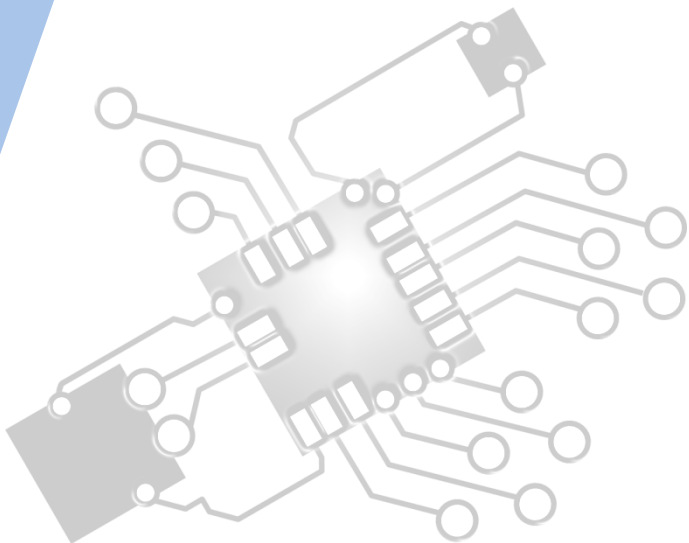




# *Planning & system installation*

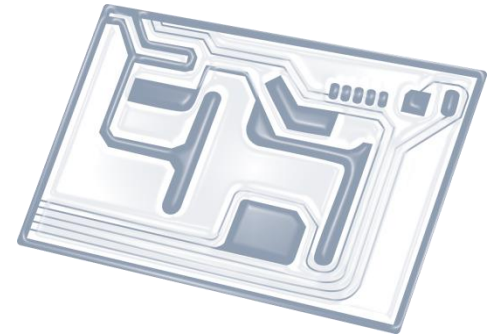
IB Computer Science



*Content developed by  
Dartford Grammar School  
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# HL Topics 1-7, D1-4



1: System design



2: Computer Organisation



3: Networks



4: Computational thinking



5: Abstract data structures



6: Resource management



7: Control



D: OOP

# HL & SL 1.1 Overview

## Planning and system installation

- 1.1.1 Identify the context for which a new system is planned.
- 1.1.2 Describe the need for change management
- 1.1.3 Outline compatibility issues resulting from situations including legacy systems or business mergers.
- 1.1.4 Compare the implementation of systems using a client's hardware with hosting systems remotely
- 1.1.5 Evaluate alternative installation processes
- 1.1.6 Discuss problems that may arise as a part of data migration
- 1.1.7 Suggest various types of testing

## User focus

- 1.1.8 Describe the importance of user documentation
- 1.1.9 Evaluate different methods of providing user documentation
- 1.1.10 Evaluate different methods of delivering user training

## System backup

- 1.1.11 Identify a range of causes of data loss
- 1.1.12 Outline the consequences of data loss in a specified situation
- 1.1.13 Describe a range of methods that can be used to prevent data loss

## Software deployment

- 1.1.14 Describe strategies for managing releases and updates



1: System design

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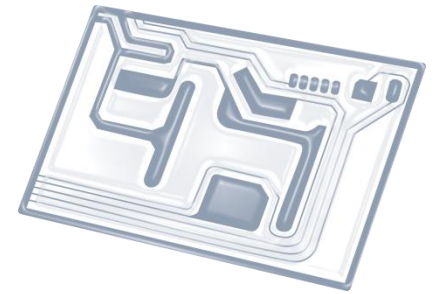
6: Resource management



7: Control

D: OOP





# Topic 1.1.4

Compare the implementation of systems using a **client's hardware** with hosting systems **remotely**

# Software-as-a-Service (SaaS)

- The client does not run its own computer system to handle operations, but lends servers from the software manufacturer that are managed and maintained by the software manufacturer. A great example is SAP.

# Comparing the Pro's and Con's

- **Advantages:**

- No cost in employing personnel to maintain system
- Software manufacturer can provide help in cases of malfunction
- Maintenance and updating managed by software manufacturer → they have staff that fully understand the system
- Client enjoys the professional know-how of the software manufacturer

- **Disadvantages:**

- Data security issues resulting from trusting your information to someone else (loss of control)
- Host may be in a different time zone, so maintenance can happen at uncomfortable times
- Because host is not the user itself, user feedback is harder to get

# Local vs Remote

- When deciding whether to use local hardware or utilise the cloud there are several considerations that must be made.
- There are four main models of computing that can be offered in the cloud.
  - Infrastructure as a Service (IaaS)
  - Platform as a Service (PaaS)
  - Software as a Service (SaaS)
  - Network as a Service (Naas)
- Each of these will have their pros and cons in terms of hosting locally or in the cloud.

# Cloud computing

Advantages	Disadvantages
<p>Convenience                      Security                      Backups                      Collaboration                      Environmentally Friendly</p>	<p>Security                      Service outage                      Storage limits                      Slow speeds                      Limited features</p>





# Local computing

## Advantages

Security  
 Backups can be controlled  
 Legacy software  
 Software control  
 Feature control

## Disadvantages

Cost of hardware  
 Technical support  
 Lack of collaboration

