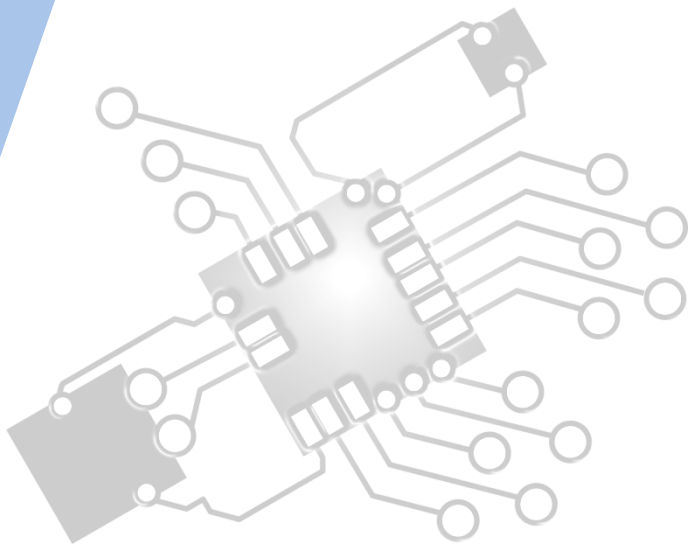
System backup

IB Computer Science



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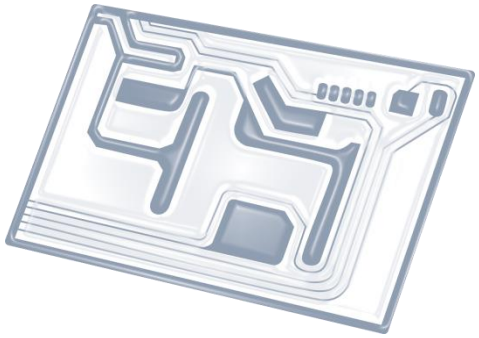
HL Topics 1-7, D1-4



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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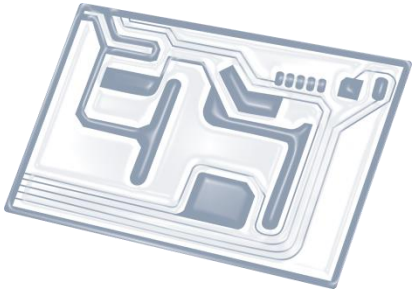


Topic 1.1.13

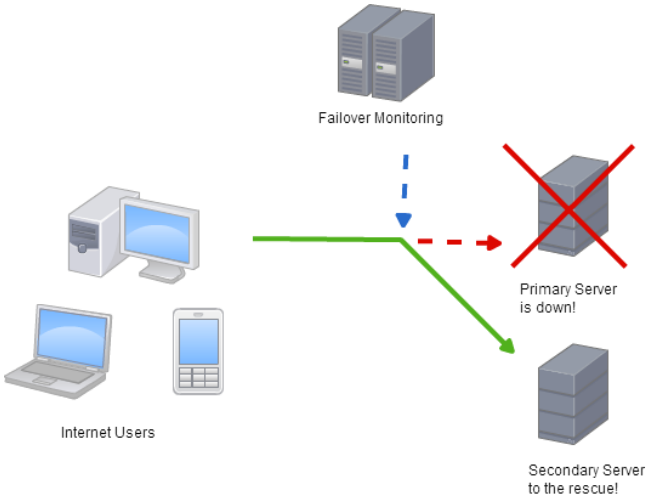
Describe a range of **methods** that can be used to **prevent data loss**

Key data loss prevention methods

- Failover system
- Redundancy
- Removable media
- Offsite/online storage

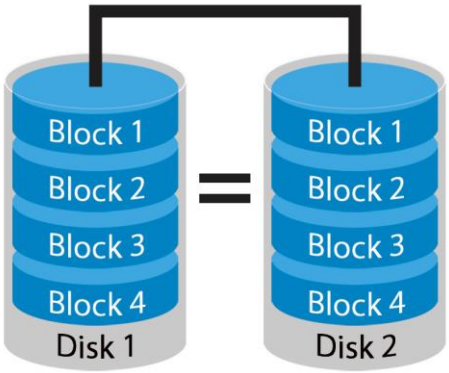
Failover system

- Failover is the constant capability to automatically and **seamlessly switch** to a highly reliable backup system.
- This can be operated in a redundant manner or in a standby operational mode upon the failure of a primary server, application, system or other primary system component.



Redundancy

- Data redundancy is a condition created within a database or data storage technology in which the same piece of data is held in two separate places.
- This can mean two different fields within a single database, or two different spots in multiple software environments or platforms.
- Whenever data is **repeated**, this basically constitutes data redundancy.

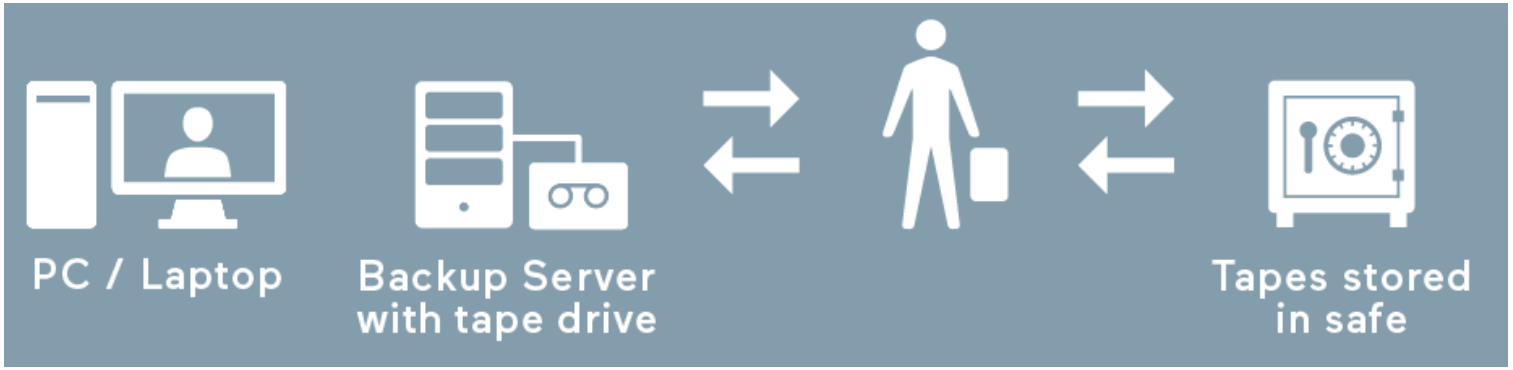


Removable media

- Removable media is any type of storage device that can be **removed** from a computer while the system is running.
- Examples of removable media include CDs, DVDs and Blu-Ray disks, as well as tapes and USB drives.
- Removable media makes it easy for a user to move data from one computer to another.

Offsite storage

- An offsite backup is a backup process or facility that stores backup data or applications **external** to the organization or core IT environment.
- It is similar to a standard backup process, but uses a facility or storage media that is not physically located within the organization's core infrastructure.



Online storage (cloud)

- Cloud backup is a type of service through which cloud computing resources and infrastructure are used to create, edit, manage and restore data, services or application backup.
- This is done **remotely** over the **internet**.
- Cloud backup may also be called online backup or remote backup.