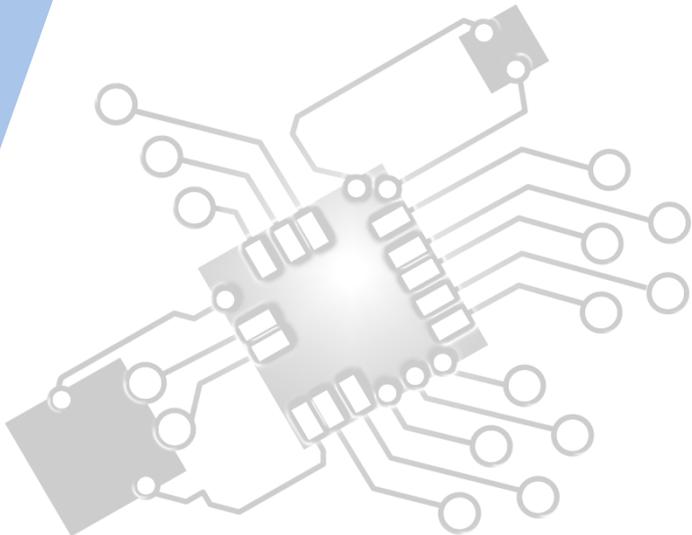




Resource Management

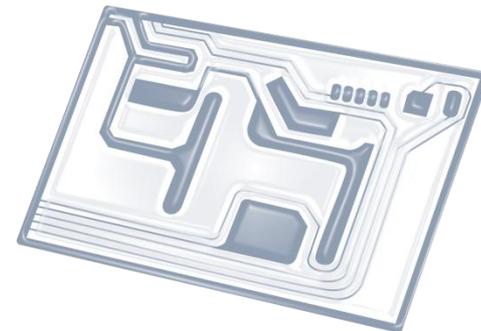
IB Computer Science



Content developed by
Dartford Grammar School
Computer Science Department



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 only 6 Overview

System resources

6.1.1 Identify the resources that need to be managed within a computer system

6.1.2 Evaluate the resources available in a variety of computer systems

6.1.3 Identify the limitations of a range of resources in a specified computer system

6.1.4 Describe the possible problems resulting from the limitations in the resources in a computer system

Role of the operating system

6.1.5 Explain the role of the operating system in terms of managing memory, peripherals and hardware interfaces

6.1.7 Outline OS resource management techniques: scheduling, policies, multitasking, virtual memory, paging, interrupt, polling

6.1.8 Discuss the advantages of producing a dedicated operating system for a device

6.1.9 Outline how an operating system hides the complexity of the hardware from users and applications



1: System design

2: Computer Organisation



3: Networks

4: Computational thinking



5: Abstract data structures

6: Resource management

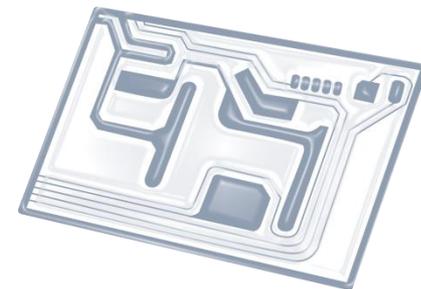


7: Control

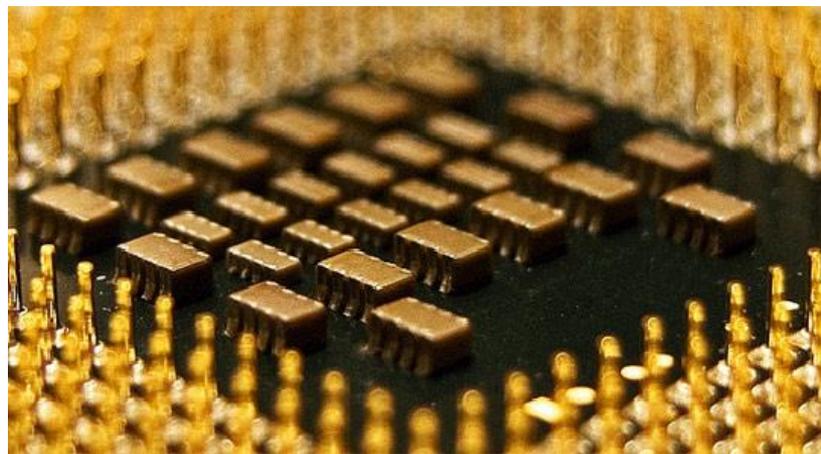
D: OOP



Topic 6.1.3



Identify the **limitations** of a range of resources in a specified computer system



Case study: 3D graphics rendering

- Single processor computers may not be able to render 3D graphics as effectively as multicore/systems with a GPU





What would the consequence be if you had to limit...

- Primary memory?
- Secondary storage?
- CPU speed?
- CPU cores?
- Connectivity?



Would this be a good gaming setup?

A promotional advertisement for the Samsung N100S 10.1 netbook. The background is yellow. At the top, the text 'Samsung N100S 10.1"' is written in a bold, black font with a white outline. Below this, a netbook is shown from a three-quarter view, displaying a game on its screen. To the right of the netbook are icons for a wireless antenna, the Intel Atom 'inside' logo, and the MeeGo logo. At the bottom left, a list of specifications is provided in white text with black outlines. At the bottom right, there is a green 'Buy Now >' button and the price 'RM769' in large red letters with a white outline.

Samsung N100S 10.1"

- Intel Atom N2100 1.6GHz
- 1GB DDR3, 320GB HDD
- Intel GMA 3150
- OS: MeeGo

Buy Now >

RM769

What is limiting this system?

Would this be a video editing setup?

INSTANT SAVINGS
\$60 OFF

Acer 15.6" Chromebook Bundle
Intel Celeron processor, bonus Acer wireless mouse and \$20 Google Play credit.
Shipping and handling included.
Item 1020102

Costco Concierge Services technical support and second-year warranty included.

Online Price	\$289.99
Instant Savings	-60.00
YOUR COST	\$229.99

COSTCO.COM ONLY



4GB Memory
32GB SSD





What is limiting this system?

Would this be good setup for watching movies?



What is limiting this system?