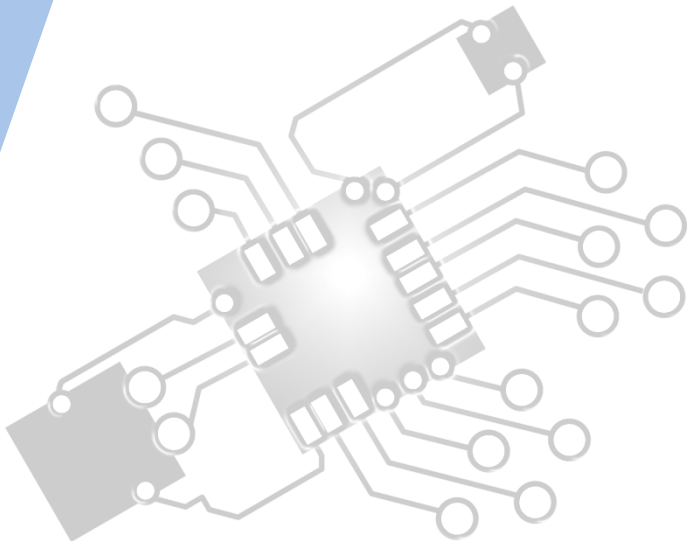




# *Objects as a programming concept*

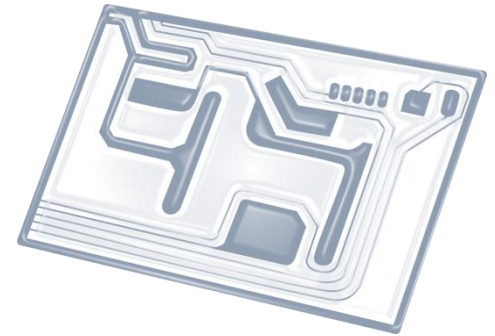
IB Computer Science



*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 & SL D.2 Overview

## D.2 Features of OOP

- D.2.1 Define the term encapsulation
- D.2.2 Define the term inheritance
- D.2.3 Define the term polymorphism
- D.2.4 Explain the advantages of encapsulation
- D.2.5 Explain the advantages of inheritance
- D.2.6 Explain the advantages of polymorphism
- D.2.7 Describe the advantages of libraries of objects
- D.2.8 Describe the disadvantages of OOP
- D.2.9 Discuss the use of programming teams
- D.2.10 Explain the advantages of modularity in program development



1: System design

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3: Networks

4: Computational thinking



5: Abstract data structures

6: Resource management

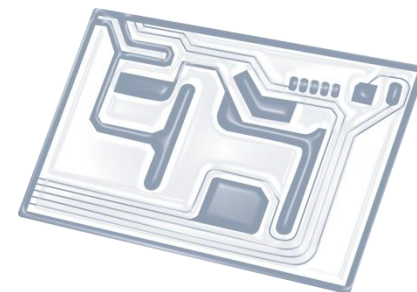


7: Control

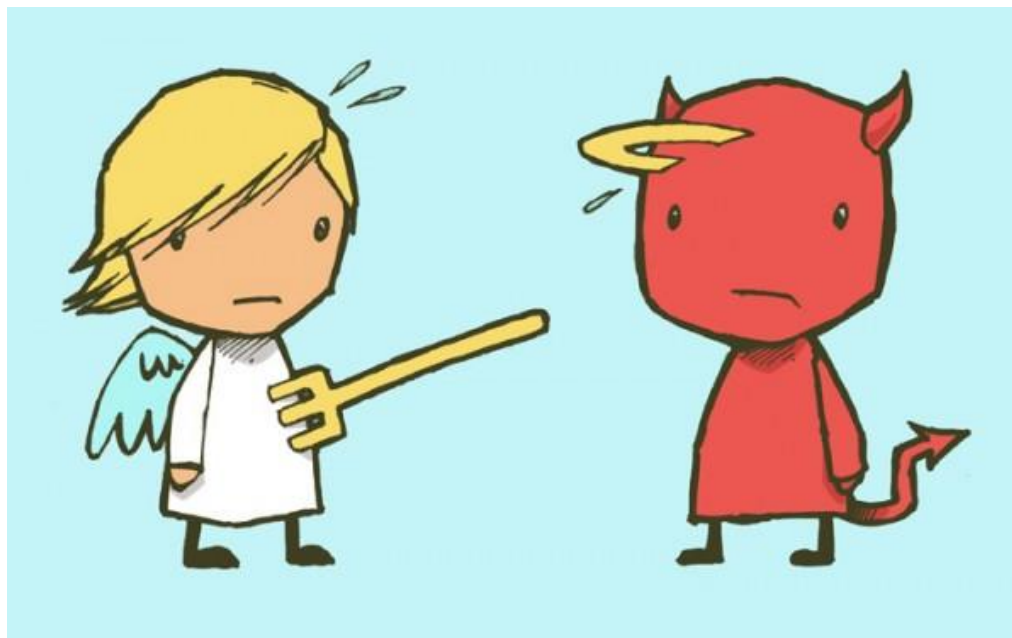
D: OOP



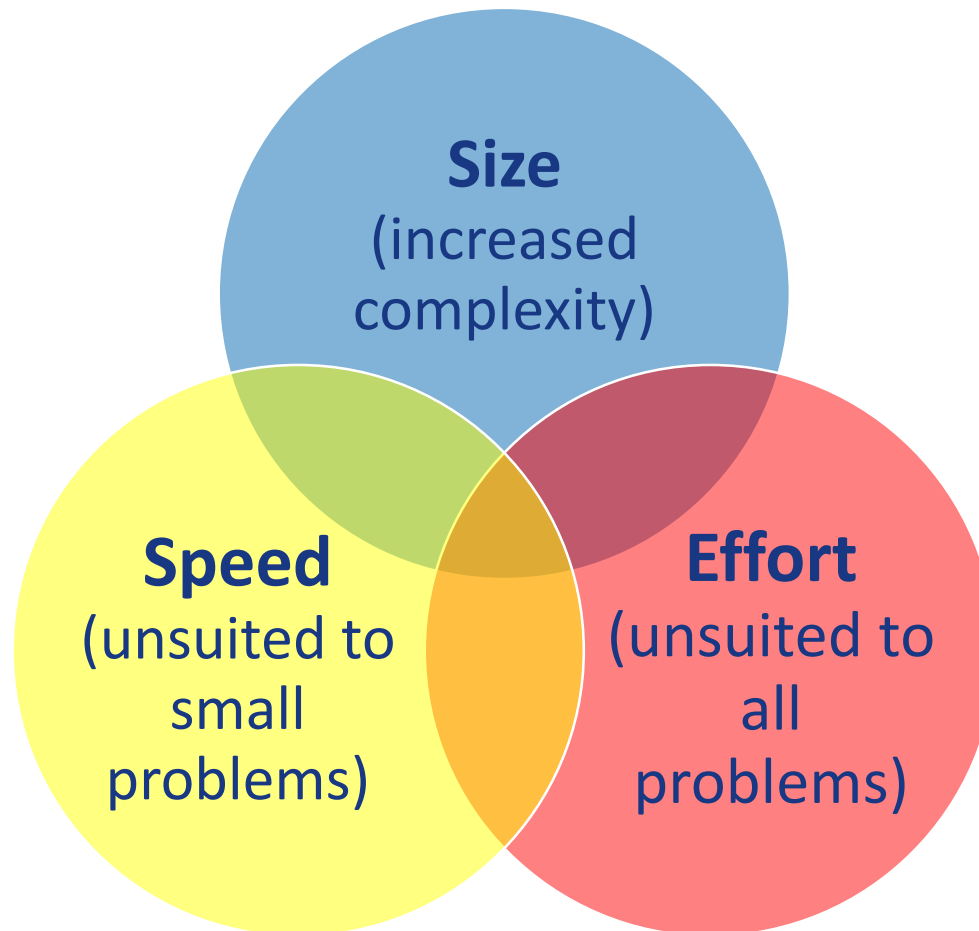
# Topic D.2.8



Describe the **disadvantages** of OOP



# Three primary disadvantages



# More disadvantages

- **Size**: Object Oriented programs are much larger than other programs. In the early days of computing, space on hard drives, floppy drives and in memory was at a premium. Today we do not have these restrictions.
- **Effort**: Object Oriented programs require a lot of work to create. Specifically, a great deal of planning goes into an object oriented program well before a single piece of code is ever written. Initially, this early effort was felt by many to be a waste of time. In addition, because the programs were larger (see above) coders spent more time actually writing the program.
- **Speed**: Object Oriented programs are slower than other programs, partially because of their size. Other aspects of Object Oriented Programs also demand more system resources, thus slowing the program down.