



Y12 Computer Science Checklist

Computer Systems, Algorithms & Programming			
Hardware	R	A	G
I can describe the purpose and function of CPU and GPU			
I can describe the purpose and function of primary storage (RAM and ROM)			
Networks	R	A	G
I can describe the benefits and drawbacks of different types of network			
I can describe the purpose and function of network hardware			
I can describe threats to networks and methods of preventing threats			
Databases	R	A	G
I can create entity relationship diagrams for a given scenario			
I can describe the purpose, features and function of database tables			
I can describe the purpose and function of ACID and CRUD methods			
Binary and hexadecimal	R	A	G
I can convert between binary, hexadecimal and denary			
I can represent negative numbers using normalised, floating point in two's complement			
I can apply masks			



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Boolean algebra	R	A	G
I can simplify boolean expressions			
LMC assembly language	R	A	G
I can describe the purpose and function of LMC instructions			
I can create simple programs using LMC instructions			
Software development	R	A	G
I can explain the differences between development lifecycle methods			
Algorithms and data structures	R	A	G
I can describe the steps of sorting algorithms			
I can describe the purpose and function of queue methods			
I can describe algorithm complexities			
I can describe the steps of data structure traversal			
I can describe how data is added/removed from given data structures			
Programming	R	A	G
I can create programs that use basic constructs (sequence, selection and iteration)			
I can create programs using 2D arrays			



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I can describe the purpose and function of subprograms			
I can describe the purpose and function of operators			
I can trace the output of recursive programs			
Computational thinking	R	A	G
I can describe the purpose and function of computational thinking methods			
I can apply computational thinking methods to a given scenario			
Computer Science	Link (add revision links- page no or online)		
OCR Ada Computer Science	https://adacomputerscience.org/topics?examBoard=ocr&stage=alevel		
Physics and Maths Tutor (OCR Computer Science)	https://www.physicsandmathstutor.com/computer-science-revision/a-level-ocr/		
Craig & Dave OCR A-Level Videos	https://craigndave.org/ocr-a-level-h046-h446-videos/		
W3 Schools: Python Tutorial	https://www.w3schools.com/python/		