

Personalised Learning Checklist	RAG
<b>1.4 Data types, data structures and algorithms</b>	<b>1, 2, 3</b>
1.4.1 Data Types	
I understand primitive data types, integer, real/floating point, character, string and Boolean.	
I can represent positive integers in binary.	
I can use of sign and magnitude and two's complement to represent negative numbers in binary.	
I understand addition and subtraction of binary integers.	
I can represent positive integers in hexadecimal.	
I can convert positive integers between binary hexadecimal and denary.	
I understand representation and normalisation of floating point numbers in binary.	
I can explain floating point arithmetic, positive and negative numbers, addition and subtraction.	
I understand bitwise manipulation and masks: shifts, combining with AND, OR, and XOR.	
I can explain how character sets (ASCII and UNICODE) are used to represent text.	

<b>1.4.3 Boolean Algebra</b>	
I can define problems using Boolean logic.	
I can manipulate Boolean expressions, including the use of Karnaugh maps to simplify Boolean expressions.	
I can use the following rules to derive or simplify statements in Boolean algebra: De Morgan's Laws, distribution, association, commutation, double negation.	
I understand how to use logic gate diagrams and truth tables.	
I understand the logic associated with D type flip flops, half and full adders.	

**Complete the RAG by giving a 1,2 or 3 on your confidence of this gained knowledge.**

1 - Red - I am not confident of this knowledge.

2 - Amber - I have some knowledge in this area.

3 - Green - I am very confident in this area, I have this knowledge secured.