

Level 0 - Fundamental Knowledge

The things you need to know before you get started - the basics of coding.

- Loops
 - For loops
 - While loops
 - Do while loops
 - For each loops (super important)
- Ifs
 - In some cases, you can do switch statements as well
- Arrays
 - 1d arrays
 - 2d arrays
- Data types
 - Int
 - String
 - Float
 - Double
 - Char
- Big O Complexity (basics, nothing extreme)

[Big list of Data Structures](#)

[Big list of Algorithms](#)

[Really good free course](#)

Books:

[Algorithms \(4th Edition\)](#)

[Introduction To Algorithms \(3rd Edition\)](#)

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Name	Learn It	Practice (Hackerrank)	Algo.is lecture	Completed
Arrays (1D & 2D)	1 2	1	2, 3	
Sets & HashMaps / Dicts	1 2 3	1 2	2, 3	
Heaps	1 2	1	2, 3	
Linked Lists	1 2	1	2, 3	
Stacks & Queues	1 2 3	1	2, 3, 8, 9	
Adjacency List	1 2		8, 9	
Binary Search Trees	1 2	1		
Minimum Spanning Trees	1 2 3	1		
Sorting & Search Algorithms	Entire List: 1 Way too much resources, just Google it	1	4	
Breadth First Search	1 2	1 2	8, 9	
Depth First Search	1 2 3	1	8, 9	