

## Sample Curriculum for 2 Levels

*(To be used as a guiding tool to pick class level only, not as an exact course content or curriculum)*

| <b>Beginner to Intermediate</b>  | <b>Intermediate to Advance</b>  |
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| <p><b>Coding Topics:</b><br/>Arrays / string, Bit manipulation, Recursion, Search, Sort, Linked list Stack, Queue and Tree</p> <p><b>Design Topics:</b><br/>Operating System Concepts, Networking, Hashtable, Language Specific Topics, OO Concepts, Database concepts, System Design</p> <p><b>Challenge Questions for Entry:</b></p> <ol style="list-style-type: none"><li>1. Insertion in a two-way sorted linked list</li><li>2. Implement insertion sort</li><li>3. Merge two sorted arrays</li></ol> | <p><b>Coding Topics:</b><br/>Advanced stack and queue, Advanced linked list, Advanced tree, Graph, Union/find, Trie/order statistics</p> <p><b>Design Topics:</b><br/>API design, Complex small scale system design, OO design concepts, Concepts of large scale systems, Design systems at scale</p> <p><b>Challenge Questions for Entry:</b></p> <ol style="list-style-type: none"><li>1. Sort a string based on the order of characters in a second string</li><li>2. Implement level order traversal of a tree</li><li>3. Implement BFS</li></ol> |