Hands on Assignments on Algorithm 101

**Guidelines**

Use appropriate code templates. C and C++ templates are embedded below.

You can solve the assignments in any programming language. If you are using C# or Java or Python, use the appropriate code template in line with the C and C++ templates as embedded herewith.

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*The Code should have*

*- File header containing Filename, problem description in brief, You name, email, emp id, Date*

*- File header should also have High level design*

*- Enough comments in the code*

*- There should be enough number of test cases well-documented in the client code (main function). Test cases should cover boundary conditions also.*

Algorithm 101 Problem Solving

As a part of hands on,

Visit the link <https://www.hackerearth.com/practice/>

Three tracks to be completed. These are listed below. You are expected to solve at least one assignment on each of the topics.

1. **Basic Programming: (3 days)**
2. Basics of Input / Output
3. Time and Space Complexity
4. Basics of Implementation
5. Basics of Bit Manipulation
6. Recursion and Backtracking
7. **Data Structures: (4 days)**
8. Multi-dimensional array
9. Singly Linked List
10. Stacks
11. Queues
12. Hash Tables
13. **Algorithms: (4 days)**
14. Linear Search
15. Binary Search
16. Merge Sort
17. Quick Sort
18. Heap Sort

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