

Exam SDA MIE 2018

Subject 4

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① Program to check if brackets are in correct order
(,) , [,] , { , } , < , > (*) (Stack must be used)

② Simulate: a)

b) insertion of 17, 6, 9, ... with double hashing on division method ($m = 15$). Say ~~what is~~ ^{compute} the d.

c) traverse tree in post, in, pre order and level + explain how its done (on example)

③ Encircle the correct answers and explain.

a) which is not good for implementing a List? (data structure which is ^{is} inefficient)

④ B+ with hash table, separate chaining, operation remove.
Elements are of form < ~~frequency~~ frequency, value >

⑤ Check if a tree is super-balanced (a term we just made up). Super-balanced means having the difference between any two leafs equal to -1, 0 or 1. (Not greater than 1)
(*) + Complexity (Queue used for level order traversal/BFS)

(*) if you used any ADT, specify its ~~interface~~ interface (operations)