

Assignment 2

1. Convert the infix expression to Postfix expression using Stack. Explain in details(3marks)

$$11 + 2 - 1 * 3 / 3 + 2 ^ 2 / 3$$

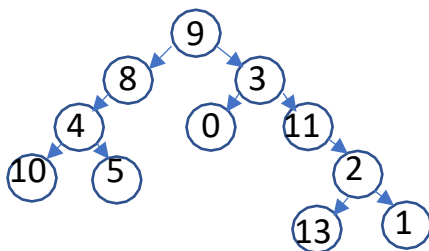
$$\text{Postfix} = 112+13*3/-22^3/+$$

2. Find the big notation of the following function? (1 marks)

$$f(n) = 4n^7 - 2n^3 + n^2 - 3.$$

$$O(n^7)$$

3. Using an in-order traversal, what are the orders of the nodes in the following Tree(2marks).



10-4-5-8-9-0-3-11-13-2-1

Left- root- right

4. What are the differences between linear search and binary search? (1 mark)

Linear search

Array can be in any order

Beginning at the beginning

Easy algorithm to understand

Binary search

array being searched are sorted

The algorithm begins at the middle

Much more efficient than linear search

5. Build a heap from the following array- draw each step (3 marks)

11	4	10	2	9	5	8	3	7	0	6
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