

Assignment 4

1 Sorting using a BST

- construct a BST from the following set {a,s,o,r,t,i,n,g,e,x,a,m,p,l,e} by using successive insertions at the leaf level (as seen in class).
- sort the above set by using an appropriate tree traversal.
- deduce a method for sorting using a BST and analyse its cost.

2 Remove operation in a BST

Write the remove operation in a BST. You will need for that an operation *max* that returns the maximum element in a BST, and a *m̄ax* function that returns a BST from which we removed its maximum element.

3 Quicksort

Implement the Quicksort.