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DATA STRUCTURES MAN-106

Tutorial-6

Spring Semester 2017-18

1. Create a class to BinartTree. Each node of the tree is of node type:

```
struct node {  int info;
struct node *left;
struct node *right;}
```

2. include functions to makeTree(), traversal in Preorder() using reccursion and levelOrder() traversal. Test the class in main().

3. Write a class to implement Binary tree in contiguous memory.

   Include function to create a tree, perform level order traversal and search a given node. include a function which returns the right child of a given data. Test the class in main ().

4. Write a program to perform sorting an array of n integers using selection sort, insertion sort

5. Write a recursive function QuickSort to sort a sequence of integers in ascending order using ` Quick Sort. Write main to test the function.

6. Write a program to sort a sequence of integers in ascending order using Heap sort.

7. Consider the array H={ 100, 90, 70, 30, 10, 60, 50, 15, 25, 5 }

   Explain that it represents a max heap. Compare the performance of Quick sort and heap sort.