# LAB 10. Binary Search Tree (BST)

1. Main program

1) Menu : 1.Insert, 2.Delete, 3.Search, 4.Print, 5.Quit

2) For each command;

- Insert: "Enter number to insert: " gets input NUM,
  **insert_tree(root, NUM)**

-delete: If (!tree_empty()) "Enter number to delete" gets input NUM
**delete_tree(root, NUM)**
else "Tree is empty"

- search: if (!tree_empty()) "Enter number to search: " gets input NUM
**search_tree(root, NUM)**
if (temp==NULL) "NOT found"
else " %d is found"
else "Tree is empty"

- Print: **draw_tree(root, 1)**
- quit: exit(0)

2. 테스트 절차(예):

Input data: (30 40 50 20 10)

1) Insert: 위 데이터를 차례로 입력 시킨후 DRAWTREE 로 검사.
2) Delete:
   - Leaf 테스트: delete 10, DRAWTREE 로 검사.
   - Single 노드 테스트: delete 20, DRAWTREE 로 검사.
   - 양쪽노드 delete 테스트: delete 30, DRAWTREE 로 검사.
3) Search: 특정 데이터를 찾을 것, 못 찾을시에는 “NOT Found” 메시지 출력

4. Print : (lecture note 의 drawtree 함수 이용할것)