Homework #4

Max Heap

Yunmin Go

School of CSEE

HANDONG GLOBAL UNIVERSITY

HW#4

- Write a MaxHeap class represented as a linked binary tree. Assume that each node has parent field as well as the usual left child, right child, and data fields.
  - Use a *tree_node* structure below.
  - Modify the source codes of Practice #9.
  - File names should be changed to LMaxHeap.h, LMaxHeap.cpp, and LMaxHeapMain.cpp
  - The parameter of insert function and the return data type of delete function are an *Element* structure which has key and data.
  - Please submit all files related to your source codes.

```
typedef struct node {
    int key;
    string data;
    struct node *parent, *left_child, *right_child;
} tree_node;
```

```
typedef struct {
    int key;
    string data;
} Element;
```

Requirements

- All of C-style functions and headers are allowed.
  - E.g., printf, fopen, fgets, etc.

- Write clean source code
  - Add proper comment in your source code
  - Consider code indentation for enhancing readability

- Submit your screenshots.

Requirements

- For unmentioned requirements, you can implement freely.
- Test your source codes with many cases for self verification.
- Upload ZIP file on LMS by compressing all your source codes and screenshots
  - File name: hw04_student id.zip (ex: hw04_20400022.zip)
- Due date: 11pm, 5/11 (Tue)