Tree Comprehensive  **Experiment Report**

Class: 计科201

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**One. Experimental purpose**

1、Do linear list operations by using basic operations of tree or binary tree.

2、Handle file operations.

3、Deep the understanding of tree and binary tree, gradually develop the programming ability to solve practical problems.

**Two. Experimental environment**

Computers equipped with Visual C6.0/CFree.

The experiment lasted for 4 hours.

**Three. Experimental content**

（Choose one of the following two:）

1. The directory structure of the specified directory file system is given, you should write into the file dir\_structure.txt by the indentation method, and calculate the storage area of the directory.。（The indentation method is shown in P93）

1. design a "automatic calculator" as follows：

（1）The expression that needs to be calculated is stored in the text file in the TXT text；

（2）Each line in the text is an expression；

（3）Expressions include operands, operators such as addition, subtraction, multiplication and division, and parentheses；

For example： （34-72.3）\*54.7-82.4

（4）"Automatic calculator" calculates each expression in the text file according to the input file name, and writes every expression of the result to the original file name in the \_out.txt, you should use the method of covering and when saving the records. The format of each row is：

expression = result。

For example：the original file is: A1.txt

The file for output is： A1\_out.txt

The format of the text in A1\_out.txt is：

（34-72.3）\*54.7-82.4 = -2177.41

For all the calculated results, you'd keep 4 digits after the decimal point if it is decimal.

**Four. Important data structures**

Binary tree

**Five. Realization idea analysis**

**The numbers and symbols are respectively input into the stack to realize the operation**

**Six. Program debugging problem analysis**

**There are many errors in the initial code**

**Seven. Experimental summary**

**Low level**

**Eight. Crew Division**

|  |  |  |
| --- | --- | --- |
| **Group division** | | |
| **Member name** | **Work done** | **Completion situation** |
| **曹敬雨** | **Creat a tree,a new tree,main function** | **Good** |
| **徐汪洋** | **Basic algorithm of addition, subtraction, multiplication and division** | **Good** |