صورة تحتوي على نص, لقطة شاشة, كمبيوتر, داخلي

تم إنشاء الوصف تلقائياً

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CODE

menuLoop(Tree):-

write(" Code Operation "),nl,

write("1 update the word tree"),nl,

write("2 Display the word tree"),nl,

write("3 count the word tree"),nl,

write("4 Exit the program"),nl,

write("please enter the desire operation code: "),

read(SChoice),atom\_string(SChoice,CChoice),

string\_upper(CChoice,Choice),write(Choice),nl,

Choice \= "4"->

action(Choice,Tree,NewTree),

menuLoop(NewTree);nl.

%.......................................menu choise

action("1",Tree,NewTree):-

write("Enter words [use STOP to end]: "),nl,

createTree(Tree,NewTree).

action("2",Tree,Tree):-

write("Tree: "),

displayTree(Tree),nl.

action("3",Tree,Tree):-

countT(Tree,C),

write("Number of Nodes in Tree: "),

write(C),nl.

%.......................................create

createTree(Tree,NewTree):-

read(RWord), atom\_string(RWord,Word),

Word \= "stop", ! ,

insertWord(Word,Tree,TempTree),

createTree(TempTree,NewTree).

createTree(Tree,Tree).

%.......................................insert

insertWord(Word,empty,tree(Word,empty,empty)):-!.

insertWord(Word,tree(Data,Left,Right),tree(Data,NewLeft,Right)):-

Word < Data,!,

insertWord(Word,Left,NewLeft).

insertWord(Word,tree(Data,Left,Right),

tree(Data,Left,NewRight)):-

insertWord(Word,Right,NewRight).

%........................................ display

displayTree(empty).

displayTree(tree(Data,Left,Right)):-

displayTree(Left),

write(Data),

displayTree(Right).

%......................................... count

countT(empty,0):- !.

countT(tree(\_, Left, Right), C):-

countT(Left,C1),

countT(Right,C2),

C is C1 + C2 +1.

QUERY:

write("\*\*\*\*\*\*\*\*\*\*\*\*\*Binary Tree Sort\*\*\*\*\*\*\*\*\*\*\*\*\*"),nl,

trace,

menuLoop(empty).