DUYỆT CÂY NHỊ PHÂN THEO 3 PHƯƠNG PHÁP

program DuyetCayNP;

type MyArray=array[1..1000] of integer;

type typeKey=integer;

type nodeTree=^node;

node=record

key:typeKey;

left, right:nodeTree;

end;

type Tree=nodeTree;

var T:nodeTree;

a:MyArray;

n,i:integer;

function TaoNode(key:typeKey):nodeTree;

var p:nodeTree;

begin

new(p);

p^.key:=key;

p^.left:=nil;

p^.right:=nil;

TaoNode:=p;

end;

procedure TaoCayRong(var T:Tree);

begin

T:=nil

end;

procedure NhapCayNP(var T:Tree; a:MyArray; n:integer);

var key, keyLeft, keyRight:typeKey;

begin

if (T=nil) then

begin

new(T);

write('Nhap vao goc ');

readln(key);

T^.key:=key;

end;

new(T^.left);

new(T^.right);

write('Nhap con trai cua ',T^.key,':');

readln(keyLeft);

T^.left^.key:=keyLeft;

write('Nhap con phai cua ',T^.key,':');

readln(keyRight);

T^.right^.key:=keyRight;

if (T^.left^.key <>0) then NhapCayNP(T^.left)

else T^.left:=nil;

if (T^.right^.key <>0) then NhapCayNP(T^.right)

else T^.right:=nil;

end;

procedure ChuyenSangMang(T:nodeTree; a:MyArray; var n:integer);

begin

if (T<>nil) then

begin

inc(n);

a[n]:=T^key;

ChuyenSangMang(T^.left,a,n);

ChuyenSangMang(T^.right,a,n);

end;

end;

procedure DuyetTruoc(T:nodeTree);

begin

if T=nil then write('Cay Rong') else

begin

write(T^.key:5);

DuyetTruoc(T^.left);

DuyetTruoc(T^.right);

end;

end;

procedure DuyetGiua(T:nodeTree);

begin

if T=nil then write('Cay Rong') else

begin

DuyetGiua(T^.left);

write(T^.key:5);

DuyetGiua(T^.right);

end;

end;

procedure DuyetSau(T:nodeTree);

begin

if T=nil then write('Cay Rong');

else

begin

DuyetSau(T^.left);

DuyetSau(T^.right);

write(T^.key:5);

end;

end;

BEGIN

TaoCayRong(T);

NhapCayNP(T);

ChuyenSangMang(T,n,a);

DuyetTruoc(T);

DuyetGiua(T);

DuyetSau(T);

end.