#include <iostream>

using namespace std;

int i = 1;

int j = 1;

struct pohon{

pohon\* kanan;

char data;

pohon\* kiri;

};

pohon\* simpul;

pohon\* root;

pohon\* saatIni;

pohon\* helperA;

pohon\* helperB;

pohon\* alamat[256];

void insialisasi(){

root = NULL;

}

void simpulBaru(char dataMasukkan){

simpul = new pohon;

simpul->data = dataMasukkan;

simpul->kanan = NULL;

simpul->kiri = NULL;

}

void simpulAkar(){

if(root == NULL){

char dataAnda;

cout<<"Silahkan masukkan data : ";

cin>>dataAnda;

simpulBaru(dataAnda);

root = simpul;

alamat[i] = root;

cout<<"Root terbentuk..."<<endl;

}else{

cout<<"Root sudah ada..."<<endl;

}

}

void tambahSimpul(){

if(root != NULL){

int penanda;

char dataUser;

penanda = 0;

while(penanda == 0 && j < 256){

saatIni = alamat[i];

if(saatIni->kiri == NULL){

cout<<"Masukkan data kiri : ";

cin>>dataUser;

if(dataUser != '0'){

simpulBaru(dataUser);

saatIni = alamat[i];

saatIni->kiri = simpul;

j++; // j = 2

alamat[j] = simpul;

}else{

penanda = 1;

}

}

if(penanda == 0){

cout<<"Masukkan data kanan : ";

cin>>dataUser; // C

if(dataUser != '0'){

simpulBaru(dataUser);

saatIni = alamat[i];

saatIni->kanan = simpul;

j++;

alamat[j] = simpul;

i++;

}else{

penanda = 1;

}

}

}

}

}

void bacaPohon(){

if(root != NULL){

int i, n, pencacah;

i = 1;

n = 1;

pencacah = 0;

cout<<endl;

while(i <= j){

saatIni = alamat[i];

cout<<saatIni->data<<" ";

pencacah++;

if(pencacah == n){

cout<<endl;

pencacah = 0;

n = n\*2;

}

i++;

}

cout<<endl;

}

}

int main()

{

simpulAkar();

tambahSimpul();

bacaPohon();

tambahSimpul();

bacaPohon();

return 0;

}