**TASK-09**

Create a menu driven program for Binary Trees

Use array based implementation for Trees. Take inputs from user.

**Code:**

#include<iostream>

using namespace std;

char tree[15];

void setroot(char val)

{

if(tree[0]=='\0')

{

tree[0]=val;

}

else

{

cout<<"Root node already exist........."<<endl;

}

}

int searchnode(char val)

{

int index=-1;

for (int i=0 ; i<15 ;i++)

{

if(tree[i]==val)

{

index=i;

break;

}

}

return index;

}

void setleft(char p,char lc)

{

int lindex=searchnode(p);

if(lindex==-1)

{

cout<<"given node is not in list...."<<endl;

}

else

{

tree[(2\*lindex)+1]=lc;

}

}

void setright(char p,char rc)

{

int rindex=searchnode(p);

if(rindex==-1)

{

cout<<"given node is not in list...."<<endl;

}

else

{

tree[(2\*rindex)+2]=rc;

}

}

void printtree()

{

cout<<"nodes in tree are as follows......."<<endl;

for(int i=0 ; i<15 ;i++)

{

if(tree[i]!='\0')

{

cout<<tree[i]<<endl;

}

else

{

cout<<"--"<<endl;

}

}

}

int main()

{

int choise;

char val,cons;

char p,lc,rc;

do

{

cout<<"enter your choise..."<<endl;

cout<<"\tpress 1 for set root..."<<endl;

cout<<"\tpress 2 for set leftchild..."<<endl;

cout<<"\tpress 3 for set rightchild..."<<endl;

cout<<"\tpress 4 for search node..."<<endl;

cout<<"\tpress 5 for print tree..."<<endl;

cin>>choise;

if(choise==1)

{

cout<<"enter the node you want to set root node"<<endl;

cin>>val;

setroot(val);

}

if(choise==2)

{

cout<<"enter value you want to set on left child"<<endl;

cin>>p;

cin>>lc;

setleft(p,lc);

}

if(choise==3)

{

cout<<"enter value you want to set on right child"<<endl;

cin>>p;

cin>>rc;

setright(p,rc);

}

if(choise==4)

{

cout<<"which node you want to search...."<<endl;

cin>>val;

searchnode(val);

}

if(choise==5)

{

printtree();

}

if(choise==6)

{

cout<<"SORRY!!INVALID CHOISE"<<endl;

}

cout<<"press c for continue or press any other key for exit"<<endl;

cin>>cons;

}

while(cons=='c');

}