#include<iostream>

using namespace std;

class person //abstract class

{

protected:

//private:

char name[40];

public:

void getname()

{

cout<<"\n\n Enter the name"<<endl;

cin>>name;

}

void show()

{

cout<<"\n\n The name is="<<name;

}

virtual void get()=0;

virtual bool outstanding ()=0;

};

//////////////////////////////////////

class student : public person //not abstract class

{

private:

float gpa;

public:

void get()

{

person::getname();

cout<<"\n\n Enter GPA of student"<<endl;

cin>>gpa;

}

bool outstanding ()

{

return (gpa>3.5)?true:false;

}

};

//////////////////////////////////////////

class professor:public person //not abstract class

{

private:

int pubs;

public:

void get()

{

person::getname();

cout<<"\n\n Enter the number of publications:"<<endl;

cin>>pubs;

}

bool outstanding()

{

return (pubs>50?true:false);

}

};

/////////////////////////////////////////////

int main()

{

//person per; //cannnot make obj

person\* pernptr[50];

int n=0;

char choice;

do

{

cout<<"\n\nEnter the student or professor data (s/p)"<<endl;

cin>>choice;

if(choice=='s')

pernptr[n]=new student;

else

pernptr[n]=new professor;

pernptr[n++]->get();

cout<<"\n\n Enter an other data(y/n)";

cin>>choice;

}

while(choice=='y');

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

{

pernptr[i]->show();

if( pernptr[i]->outstanding() )

cout<<"\n\nThe person is outstanding"<<endl;

}

getchar();

getchar();

return 0;

}